

SAMSUNG SECURITY SOLUTION *iPOLiS*

2011 Integrated Security Solution





iPOLiS

SAMSUNG SECURITY SOLUTIONS

With the worldwide threat of crime and terrorism increasing daily, the demand for high quality, fully networked video surveillance systems is also growing rapidly. Users are demanding new capabilities and greater efficiency from their security systems. Samsung Techwin is committed to its goal of producing high performance products that introduce features and capabilities able to push the boundaries of what can be achieved.

We are redefining what you should expect from a total security solution.

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iPOLiS

A Samsung iPOLiS IP & Network solution brings cutting-edge security equipment and advanced systems together into one centrally managed, fully integrated package.

Designed to deliver an optimized security solution for a host of applications, including infrastructure, national defence, city-wide protection and Intelligent Traffic Systems (ITS); an iPOLiS solution is the result of Samsung's technical evolution and innovation with the goal to create a safer, more convenient world.



iPOLiS



Peace of mind at all times with Samsung Techwin's innovative security solutions...



SOC



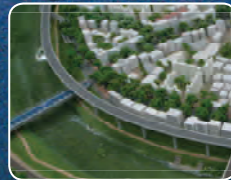
City



Military



ITS



Retail



iPOLiS

TSM(Software)

TSM Standard

TSM Professional

TSM Enterprise

Package(System Components)

System Manager

Media Server

Video Analytics Module

Video Display Module

Console

Automatic Number Plate Recognition

Vehicle Detection System

Video Wall

Security Robot

Devices

Input/Output

Transmission/Control/Analytics

Peripheral

Recommended Devices

Application Solution

ITS/City Solution

Advanced Intelligent Traffic System (ITS) solutions bring intelligence to video through technologies such as Intelligent Video Analytics (IVA), Vehicle Detection System(VDS) and Automatic Number Plate Recognition (ANPR) to ensure a host of potential traffic related issues can be avoided and incidents dealt with effectively and efficiently over an entire city.

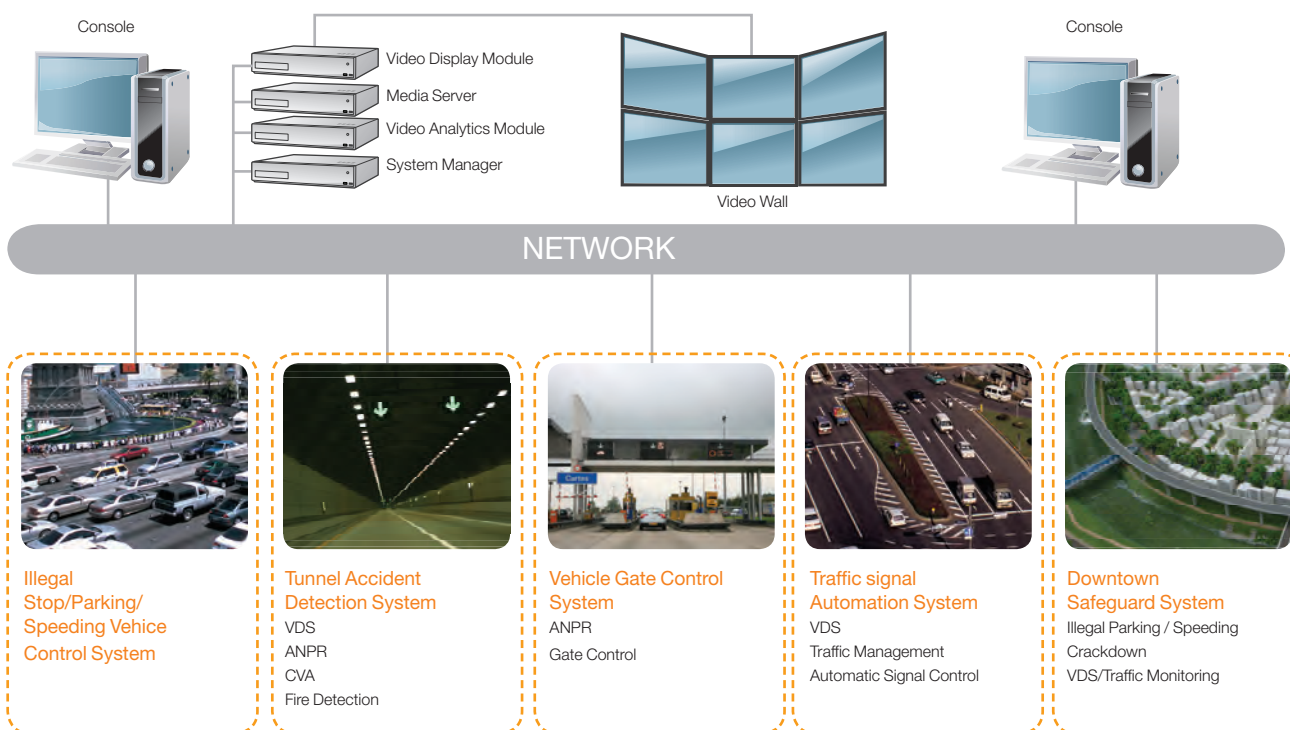
IVA is able to interrogate a scene in real-time and alert security operators and/or perform specific actions based on a set of pre-determined parameters. For example, IVA can be used to detect traffic accidents and automatically turn-on warning signs along the highway to warn other drivers of the danger ahead, whilst VDS, ANPR can be used for a host of applications including identifying speeding vehicles across a city, bus/taxi-lane violations and vehicle gate/barrier opening.

ITS/City solutions include:

- Identification of illegal stop/parking and vehicle speeding
- Detecting accidents in tunnels using Vehicle Detection System(VDS) and IVA technology
- Vehicle gate control system and gate control technology
- Highway traffic flow and counting systems using VDS and traffic volume measuring technology
- Traffic signal automation system using traffic volume measuring and automated signal control technology
- Seamless integration with Total Security Manager (TSM) platform

Command and Control Center

Local monitoring room



Application Solution

Military Solution

Military solutions are designed to protect key military facilities through the deployment of scientific, intelligent, automated, and unmanned state-of-the-art surveillance devices to enable 24-hour control and operation from a remote central control centre.

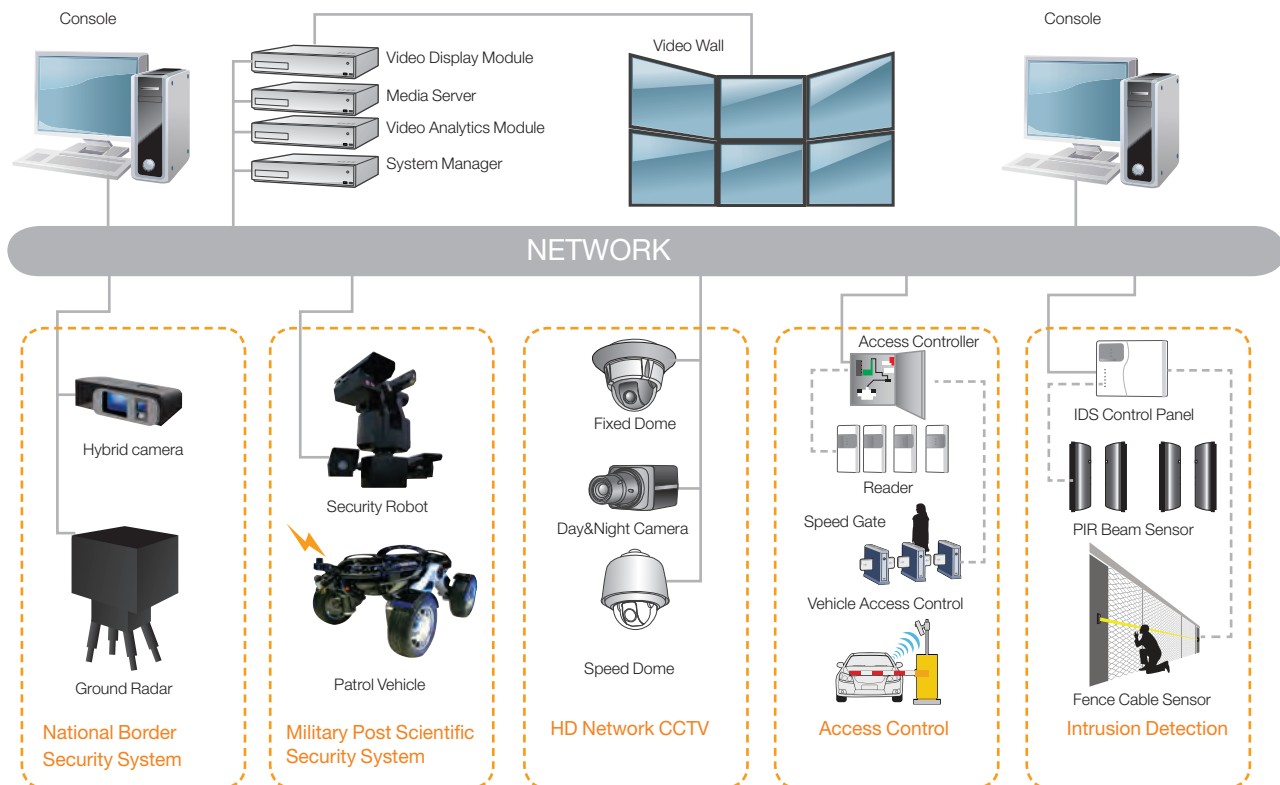
Samsung Techwin scientific intelligent surveillance devices are not held back by human limitations in areas such as sensing and perception. This means a military solution is able to provide the most effective security system available today and by using defogging, thermal imaging and IR camera technology can detect intruders at night or in adverse weather conditions including snow and heavy fog.

Military solutions include:

- Scientific security system integrating artificial intelligence robots with other security systems
- Extensive border security systems with accurate and stable platforms for mounting lethal and non-lethal weapons
- Day and night high-quality network based surveillance systems using hybrid camera technology (thermal imaging + optical imaging) and High Definition network cameras
- IP based physical access control and ANPR systems
- Seamless integration with Total Security Manager (TSM) platform

Command and Control Center

Local monitoring room



Application Solution

SOC Solution

SOC solutions provide a fully integrated security system to protect social infrastructure including power plants, oil storage bases and oil pipelines.

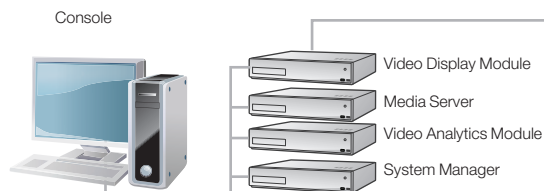
By utilizing both static and mobile artificial intelligence robots with enhanced imaging technology an extended area can be protected against unauthorized access and also used to detect incidents such as the outbreak of fire or leaks.

All security devices including High Definition network surveillance, access control, intrusion detection systems and dustproof/explosion-proof surveillance equipment are operated on a single network-based integrated platform, maximizing system efficiency and operational convenience.

SOC solutions include:

- Scientific security system integrating artificial intelligence robots with other security systems
- Unmanned static and mobile patrol robots can detect unauthorized access or incidents including the outbreak of fire or oil leaks.
- Highly reliable dustproof/explosion proof camera packages protect volatile sites
- Surveillance systems use hybrid camera technology (thermal imaging + optical imaging) coupled with High Definition network cameras
- IP based physical access control and ANPR systems
- Seamless integration with Total Security Manager(TSM) platform

Command and Control Center



Local monitoring room



NETWORK





TSM_(Software)

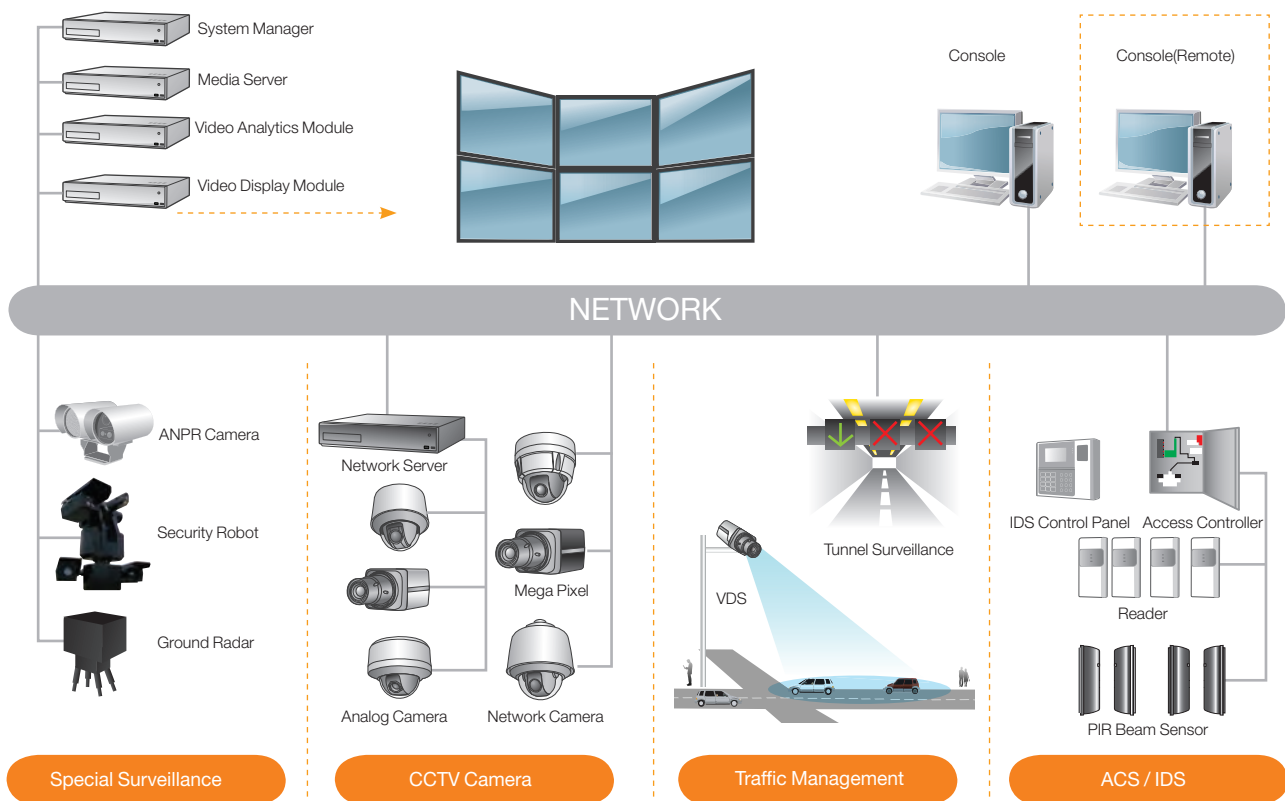
TSM Standard
TSM Professional
TSM Enterprise

2011 Integrated Security Solution

Total Security Manager (TSM) is a fully scalable end-to-end integrated solution capable of managing, via a single platform, multiple video sources as well as a wide range of other systems including access control, ground radar, intruder detection and number plate recognition.

With versions available to manage anything from a small single site to a full city-wide solution that requires thousands of devices and users over thousands of individual sites; TSM delivers a fully scalable architecture designed to help role-based local control centers function more efficiently and effectively.

The risk factors and events detected by intelligent video analytics engines are displayed in 3 dimensions using the 3D Geographic Information System (GIS) engine so that operators can instantly get an enhanced perception of the situation and take appropriate action. Predefined scenarios can also be entered into the system allowing operators to follow work-flows in the case of an incident in order to improve communications and response times.



Key Features

- **Intelligent Video Analytics**

Applied to a variety of applications intelligent video analytics provides:

- Detection of an unregistered or disappearing object
- Detection of an object accessing a restricted area
- Crowd detection

- **Monitoring Traffic Condition**

With VDS (Vehicle Detection System) and ANPR (Automatic Number Plate Recognition), it provides information about traffic flow and average vehicle speed and detects unregistered/missing/illegal/suspicious vehicles in sync with the DB auto search feature.

- **Storage of Metadata**

For an easy and correct video analytics, it features the storage of metadata that contains graphic data with the video analysis information of event occurrence time and place.

- **Synchronization with the access control and intrusion detection systems**

TSM provides an user interface so that the user can operate and manage the access control and intrusion detection systems on an integrated single platform, and implements the user defined scenario in case of an event through the event-based synchronization across all systems.

- **2D/3D GIS (Geographic Information System) Engine**

Developed using 3D stereoscopic technology, the GIS engine displays information of device location, alarm status and the location of alarm onto a graphical map to help give a clear overview of the situation.

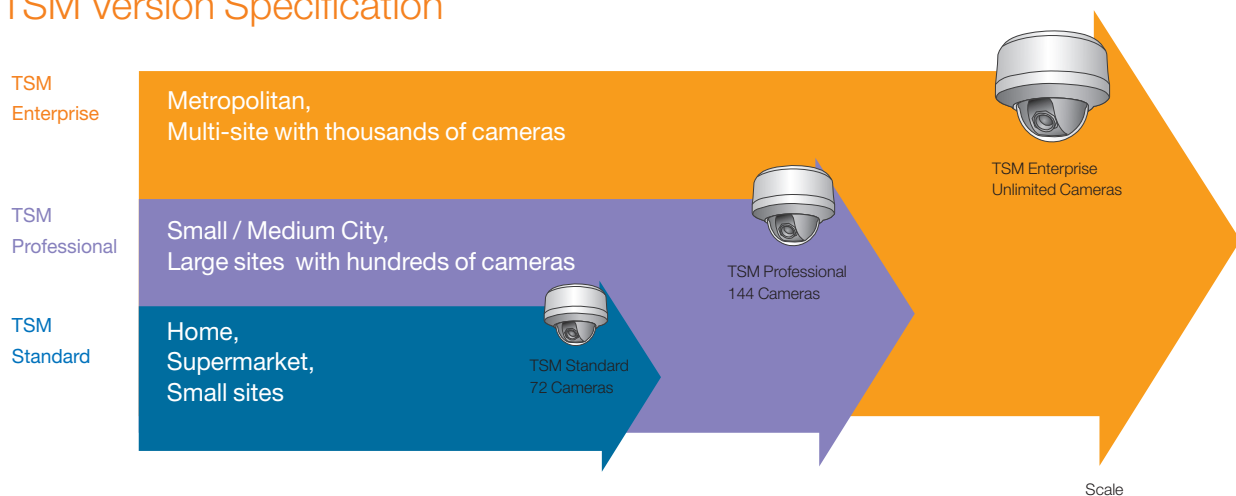
- **Support for High Definition network camera**

Full HD camera resolutions are supported to deliver high resolution images

- **Flexible and scalable system architecture**

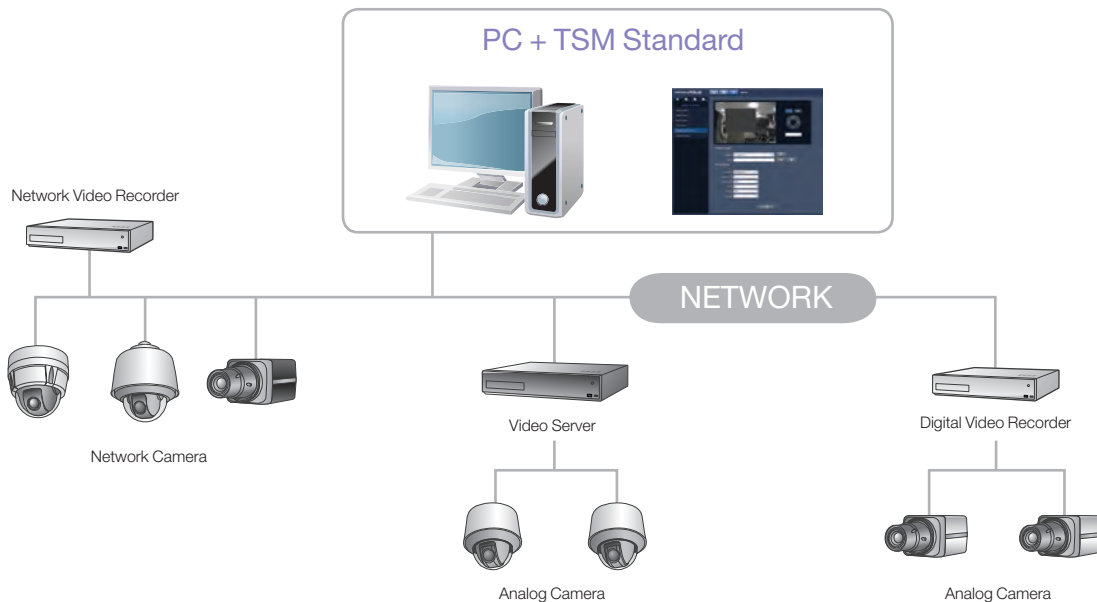
Three versions of TSM are available depending on the camera count and system scale:

TSM Version Specification



TSM Standard

Operators can manage and display video from up to 72 channels on a single integrated server. This not only makes for a very efficient and cost effective security system because of its simple design, but it also helps integrate conventional analog CCTV cameras with network devices onto a single video server.

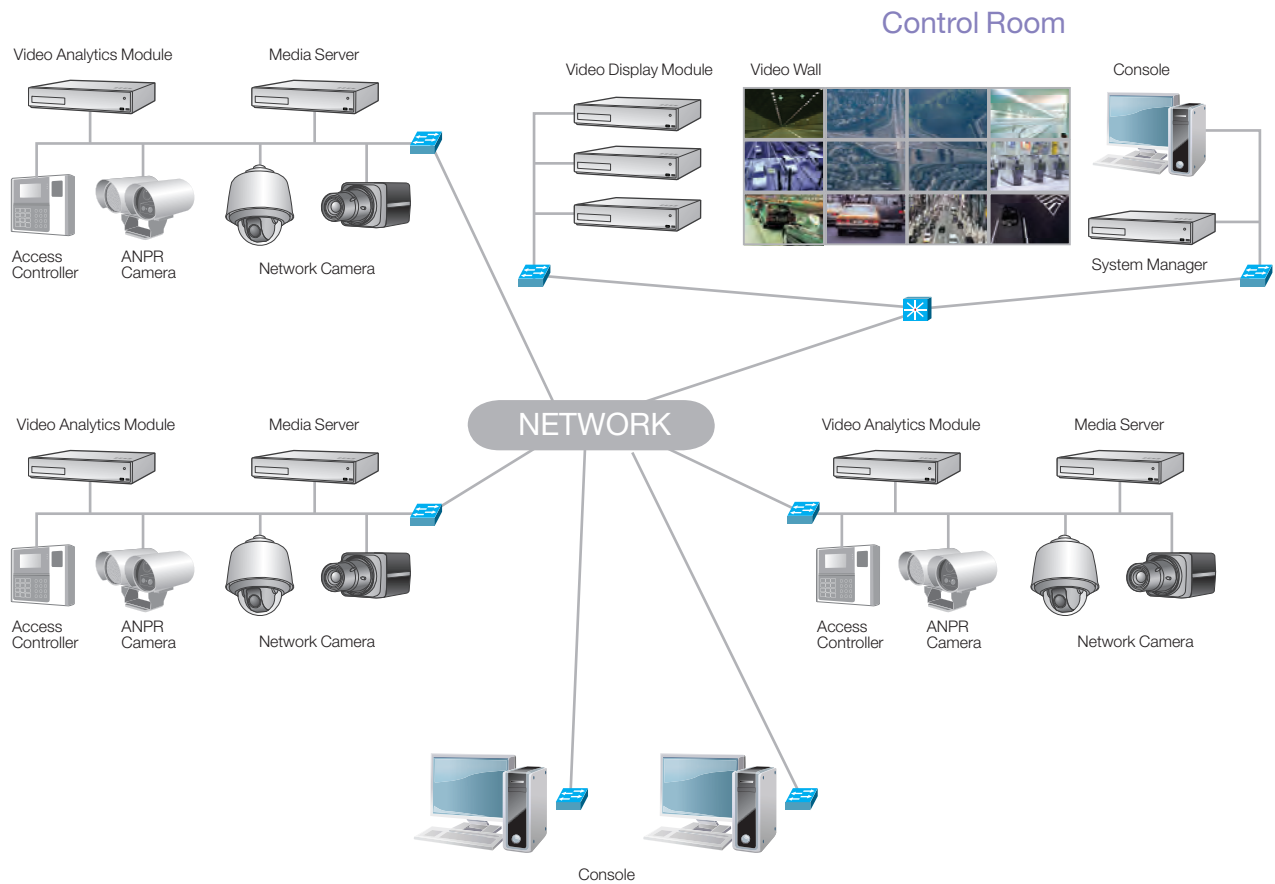


TSM Version Specification

	TSM Standard	TSM Professional	TSM Enterprise
Max # of Cameras	72	144	Unlimited
Max # of Users	1	16	Unlimited
Deployment Type	Standalone (PC software)	Single-server	Multi-server, multi-site (master /slave support)
GIS Map	2D	2D/3D	2D/3D
Video Wall Support		Yes	Yes
Video Export		AVI, MP4	AVI, MP4
Customization support*		Yes	Yes
Network Storage			Yes
High Availability			Yes
Data center Support			Yes
Video Analytic (Optional)		Motion Detection, Tracking, Virtual Line Pass, Enter/Exit, Left/Theft, Tampering, ANPR, Illegal Parking Spotting Gathering Crowds	

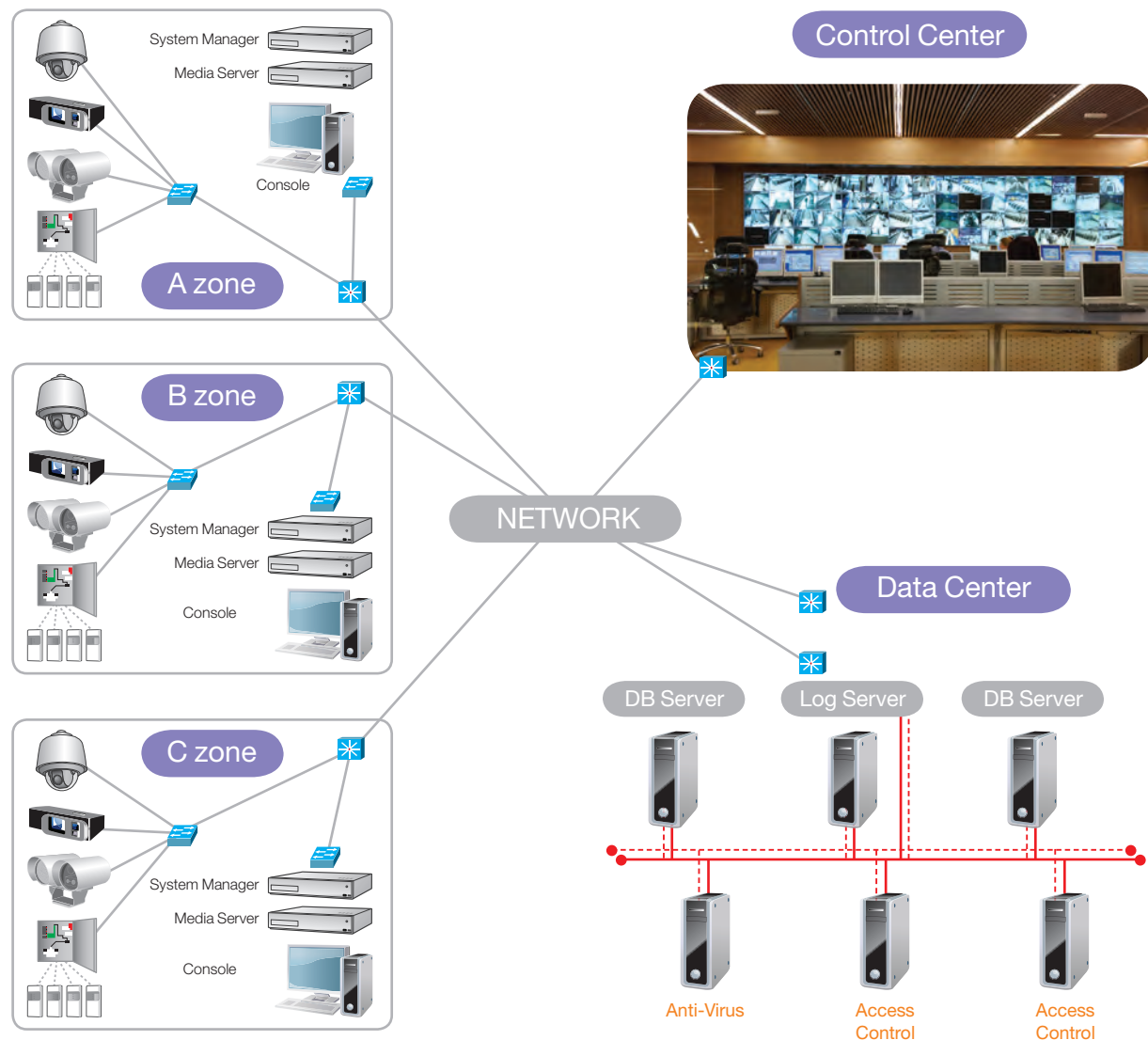
TSM Professional

Providing a suitable platform for medium sized security systems, TSM Professional supports up to 144 channels and 16 users across multiple media servers. With a modular and flexible system design, TSM Professional allows the operator to manage various system packages from a single, fully integrated platform including video wall systems, Automatic Number Plate Recognition (ANPR) and Vehicle Detection System (VDS).



TSM Enterprise

Featuring unlimited scalability, TSM Enterprise provides an enterprise-level operating platform that is optimized for metropolis sized applications that utilize any number of systems including those found in Intelligent Traffic Systems (ITS), Social Overhead Capital (SOC) integrated security systems and military security systems. TSM Enterprise also supports the operation and integration of separate data centers to ensure the security of data.





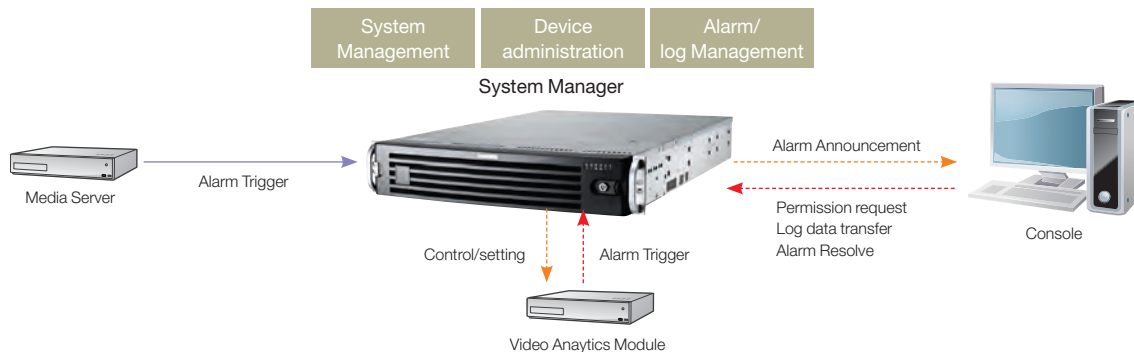
PACKAGE (System components)

System Manager
Media Server
Video Analytics Module
Video Display Module
Console
Automatic Number Plate Recognition
Vehicle Detection System
Video Wall
Security Robot

2011 Integrated Security Solution

System Manager

System Manager is a main system server that helps the user configure and manage all iPOLiS devices ranging from field-level devices such as cameras, sensors and controllers to control-level devices such as storage, video analytics modules and display devices. It also processes alarm and event data.



Main Functions

- System privilege configuration, access authorization, login management
- System distribution management and operation, properties management
- Handling and transfer of alarm/event, user defined event scenario management

Features

- iPOLiS system management
 - System resource management (ex: device and user)
 - Real-time system management, monitoring and web interface management
- All operations performed on a single server
 - Monitoring, control, database & messaging
- Central system management
- Event alarm management and tracking
- Integrated interface in sync with multiple application packages (optional)
 - VA, ANPR, VDS, ACS, GIS (3D Map) packages
- Enhanced security using data transfer encoded in Data Encryption Standard (DES)
- Reliability
 - Support Failover Server
 - Reliable hardware platform: Redundant Power/ heat detection system
- Various user defined operating platforms and languages

Hardware Specifications

Memory Bus
DDR3 1333MHz System BUS

SATA Controller
6 X SATA2 300MB/s ports

Expansion Slot Type
1ea PCI 32bit/33MHz

Hard Disk
80GB

Cooling Fan
PWM Fans

Processor
2ea Intel Xeon E5606

Power Supply
AC 100 ~ 240V free volt

Main Memory
16GB

Optional
N/A

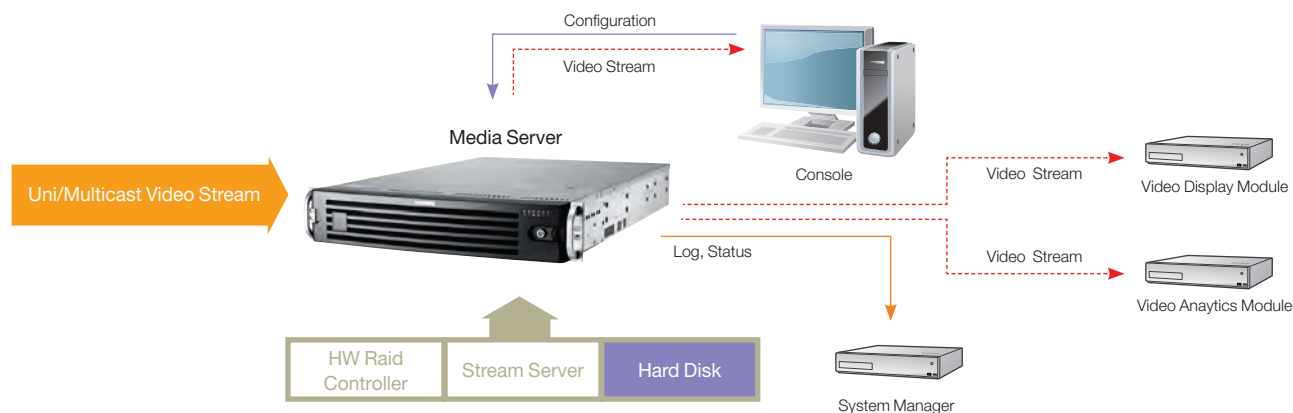
Dimensions
437 x 648 x 89(mm)

NIC
INTEL E1G42ET N/A

Graphic Card
512MB

Media Server

Media server enables the user to store and manage video/audio/data in an effective way using network-based mass storage, video compression and streaming technologies.



Main Functions

- Video/audio/alarm data storage
- Video streaming (playback)
- Storage management

Features

- High reliable hardware design
 - Redundant power and cooling system(swappable)
 - Redundant-network interface
 - RAID 1/5/6 supported
- Record: 128Mbps
- Streaming: 64Mbps
- Network storage supported
 - SAN(iSCSI), NAS
 - Data transfer to the network backup storage according to the schedule
- Export format - AVI, MP4
- Synchronization with multiple system
 - ANPR, VA, ADS
 - Synchronized with other systems using common APIs
- Properties control and management of the media server using System Manager
 - Central control management using System Manager
 - In case of a disk error – system logs, events and alarms using System Manager
- In case of an event, transfer an alarm message according to the user defined security policy and scenario

Hardware Specifications

Memory Bus
DDR3 1333MHz System BUS

SATA Controller
6 x SATA2 300MB/s ports

Expansion Slot Type
1ea PCI 32bit/33MHz

HardDisk
80GB

Cooling Fan
PWM Fans

Processor
1ea Intel Xeon E5606

Power Supply
AC 100 ~ 240V free volt

Main Memory
8GB

Optional
N/A

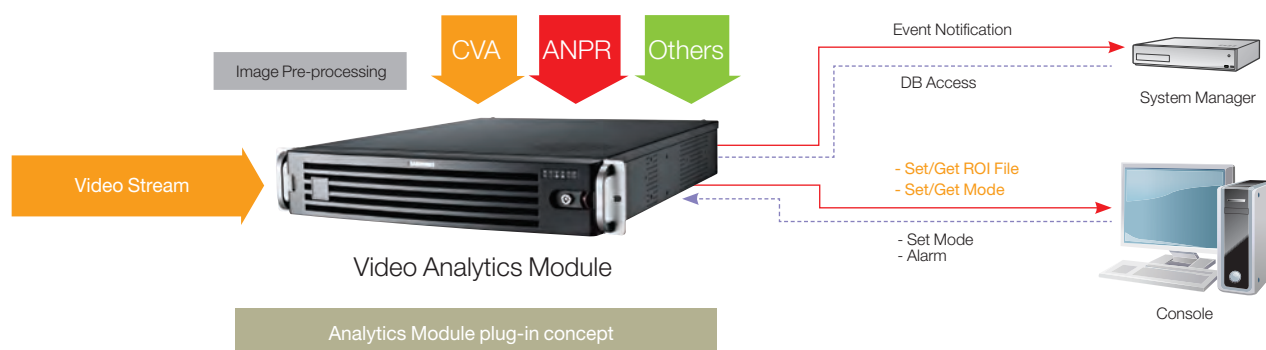
Dimensions
437 x 648 x 89(mm)

NIC
1Gb/2Port(PCI-E x 4)

Graphic Card
512MB

Video Analytics Module

The Video Analytics Module uses an advanced intelligent video analytics algorithm coupled with sophisticated digital image processing technology to analyze video from cameras on the network and determine risk factors programmed into the system. If a risk factor is identified an appropriate alarm is produced based on the rules for that particular risk.



Main Functions

- Detection on event using video analytics
- Display alarm and video according to the analytics results
- Metadata transfer

Features

- Back-end video stream analytics
- H264 and MPEG-4 formats supported
- Process 4CIF 4 channels and 30fps NTSC (or 25fps PAL) simultaneously
- ROI (Region-of-Interest) setting for each channel & multiple VA setting
- More than one alarm for each VA function
- Supported VA functions:
 - Motion Detection
 - Object tracking, detect removing and permanently removed object
 - ANPR, illegal parking, traffic management
 - Virtual Barrier Detection
 - Camera tampering and defog
- Independently trigger and transfer alarms
- Transfer alarm and metadata to multiple servers (System Manager, Media server, Console workstation) and devices
- Transfer processed video streams to a max of 4 channels simultaneously.
- System function setting and controlling using web interface

Hardware Specifications

Memory Bus
DDR3 1066/1333

SATA Controller
6EA S-ATA II 3.0Gb/s

Expansion Slot Type
2EA PCI-Express 2.0 x16
2EA PCI-Express 2.0 x1
3EA PCI

HardDisk
250GB

Cooling Fan
N/A

Processor
Intel i7 870

Power Supply
AC 100 ~ 240V free volt

Main Memory
4GB

Optional
80mm 4EA Fans

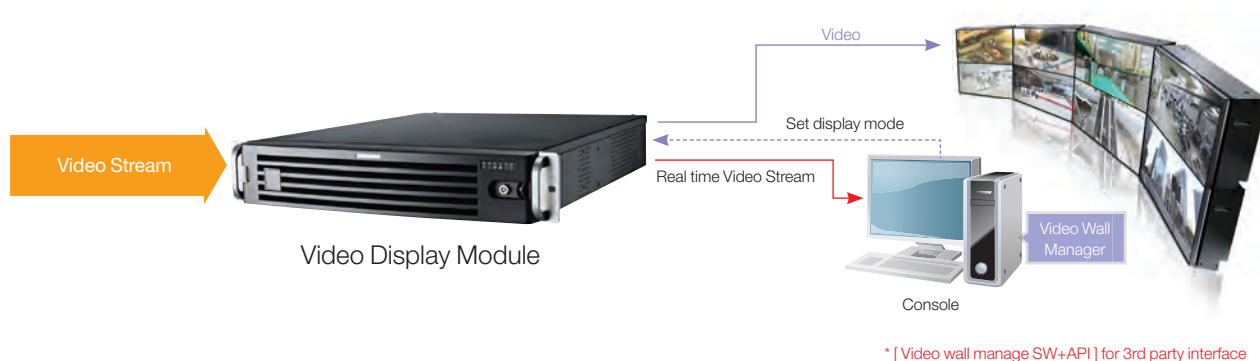
Dimensions
488X580.2X88mm

NIC
1000 Mbps

Graphic Card
1G

Video Display Module

The Video Display Module displays multichannel video streams on multiple monitors in user defined display mode. It also provide various screen layout and sequence view with virtual matrix function.



Main Functions

- Multichannel video display
- Split screen and sequence control
- Virtual Matrix

Features

- Flexibility and scalability
 - Display multichannel video streams on multiple monitors in user defined display mode
- Remote central management using System Manager
- Support H. 264, MPEG-4, JPEG
- Decoding:
 - Decodes up to 18 streams across 2 monitors
 - MPEG-4 4CIF 18Channels real-time
 - H.264 baseline 4CIF 18Channels real-time
 - H.264 baseline 1080p 4Channels real-time
- Multi layout support
 - 1 image, 4 images (2X2), 9 images (3X3)
 - 6 images (1large + 5small), 8 images (1large + 7small)
- Auto Sequence
- Dual monitor system supported

Hardware Specifications

Memory Bus
DDR3 1066/1333

SATA Controller
6EA S-ATA II 3.0Gb/s

Expansion Slot Type
2EA PCI-Express 2.0 x16
2EA PCI-Express 2.0 x1
3EA PCI

HardDisk
250GB

Cooling Fan
N/A

Processor
Intel i7 870

Power Supply
AC 100 ~ 240V free volt

Main Memory
4GB

Optional
80mm 4EA Fans

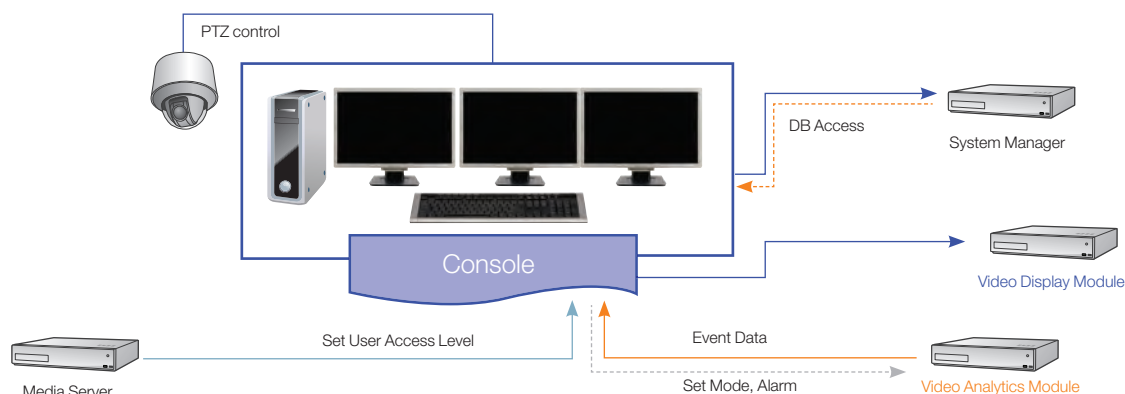
Dimensions
488X580.2X88mm

NIC
1000 Mbps

Graphic Card
1G

Console

The Console enables operators to monitor system status and alarm/event status, providing an intuitive user interface to facilitate system control and management.



Main Functions

- Event/alarm monitoring, system status monitoring
- Camera PTZ control, video search and play
- Remote control of field-level devices including access control systems and alarm sensors

Features

- Various user defined screen layouts with “drag-and-drop” functionality
- PTZ control
 - Zoom/focus/speed
 - Preset/Area Zoom/Joystick : 360 degrees direction and zoom in/out
- Central management User Interface (UI) for a large site
 - Add/edit/monitor the status of key systems/devices (registered with System Manager) on the map
 - User, control centre, system/device assigned for each server
- Map support
 - Intuitive viewer of map-compliant system and the components
 - Graphic file formats in various standards supported (BMP, JPEG, TIFF)
 - 3D GIS map supported
- Multi-monitor system
 - VGA video card x 1: 2 monitors supported
 - Using optional hardware: Up to 3 monitors supported
 - VGA video card x 2: up to 4 monitors supported

Hardware Specifications

Main

Supports Intel® i3 /i5 /i7 based processors in LGA1156 package
Intel H55 Chipset
1066/1333 Mhz System Bus
4 x Dimm
6 x SATA2 Port On Board, One Ultra DMA 66/100/133 IDE controller integrated in JMicron® 368
2ea PCI-E gen2x16 /2ea PCI-E gen2x1 /3ea PCI(3.3V, 5V)
5 x Low-Profile, Full Length I/O Expansion Slots
4 x 80mm Fan
2 x USB Front
600W Power Supply(EMI Filter, Green IC, Made in Korea)
88(H) x 428(W) x 550(D)mm(2U)
14kg(Include CPU, Memory, Disk, VGA, Power Supply)

Processor

1EA Intel i7 870

Memory

2EA 2G DDR3 1333Mhz (unbuffered DIMM)

VGA

2EA GeForce GTS 250 1GB DDR3 (available RGB 1port on the front side)

Heatsink

1EA CPU Heatsink with Fan Cooler

ODD

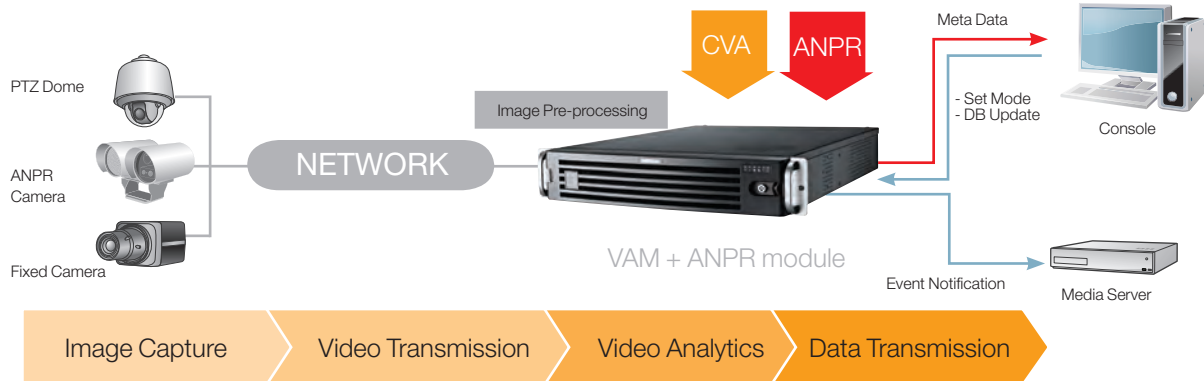
1EA DVD-Multi Drive

NIC

1EA 1Gb /1Port(Onboard)

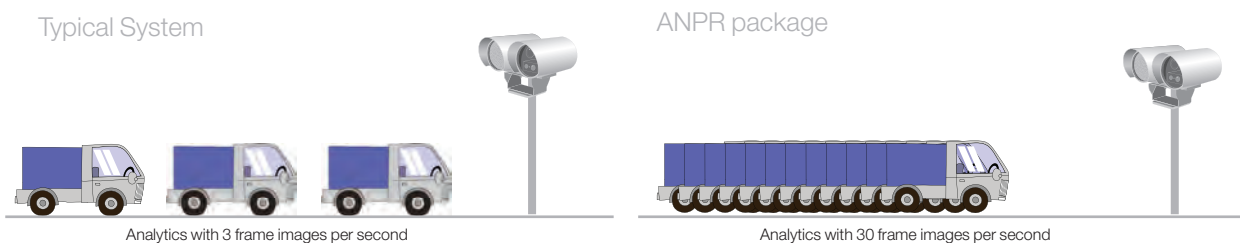
Automatic Number Plate Recognition

The ANPR package, which consists of a high-speed recording camera with laser sensor and infrared LED lighting for 24-hour performance, enables the effective capture of vehicle number plate details on both moving and stationary vehicles. This package is easy to install and cost-effective as it does not require installing additional devices, such as a loop coil, in the road.



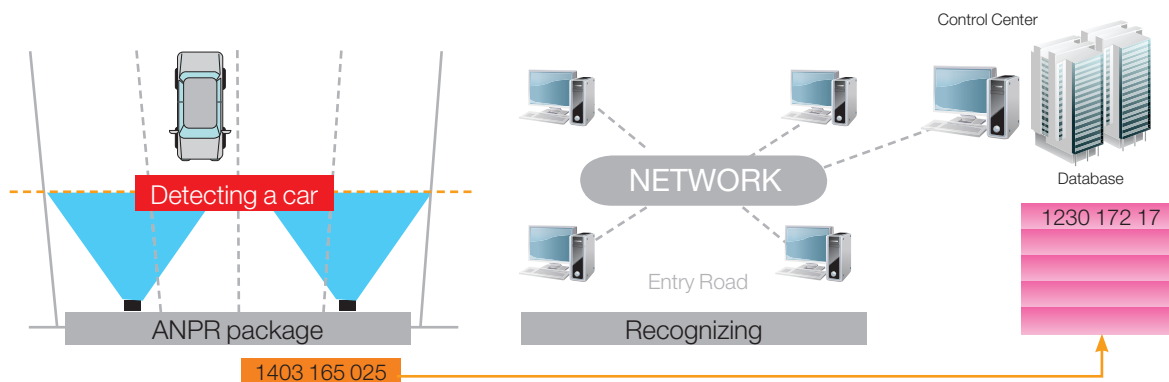
Fast and accurate recognition

Unlike conventional ANPR analysis which is limited to just 2~3 frames per second, the Samsung ANPR system analyzes at 30 frames per second in order to increase accuracy and capture the details of high speed vehicles without the need for a separate external trigger.



System Application

The ANPR intelligent analysis engine can detect driving vehicle and recognize its number plate.



Application

- Anti-crime measures on the road

ANPR installed on the entrances and exits of major roads can be used in conjunction with a database search engine to check if a vehicle is stolen or of interest to the authorities. The system makes calculations such as possible routes of travel and time to next junction by using information from various checkpoints.



- Illegal parking and signal violation detection

Illegal stopping, parking and signal or lane violation can easily be detected using ANPR, using a mix of fixed systems (installed on the traffic signal pole) and mobile systems (installed on a vehicle) comprehensive coverage can be achieved.



- Vehicle Access control

An ANPR installed at the entrance of an apartment block, large discount store, department store or public office, can check the registration of a vehicle wanting to gain access and control the entry gate. A perfect unmanned automated parking system can also be implemented in sync with a parking meter system for payment.



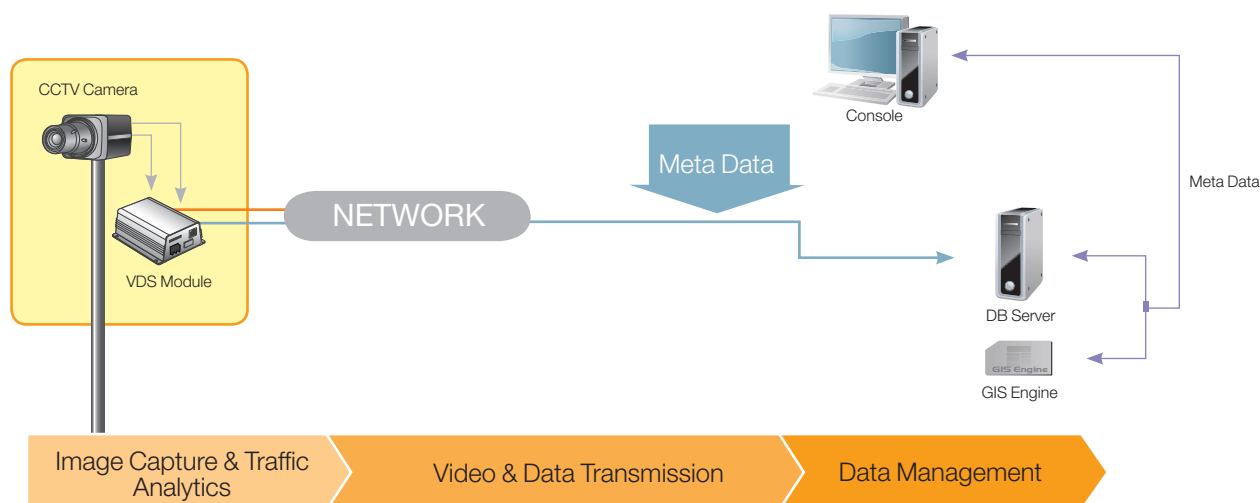
- Parking guidance

By installing a camera on each passage and parking area of a large-scale parking lot, a convenient parking service system can be implemented and drivers can be directed by signs to an empty parking space.



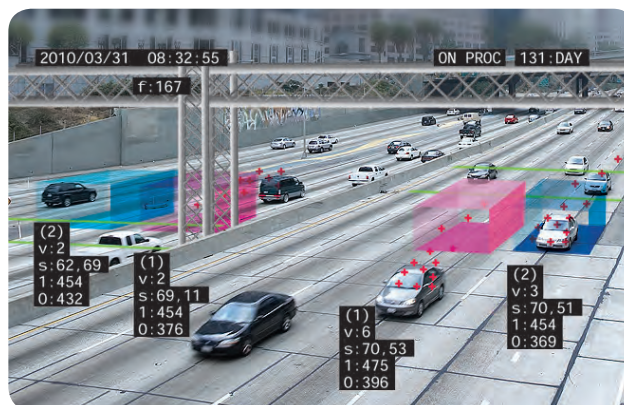
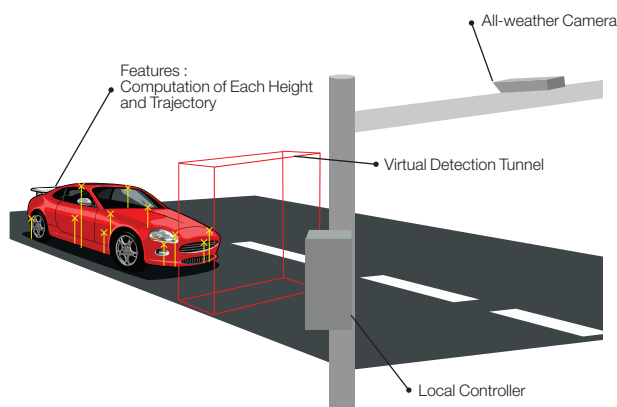
Vehicle Detection System

The VDS collects a variety of traffic information such as traffic volume, average vehicle speed, and traffic congestion from network cameras at various locations along a highway or city centre and is able to detect the likelihood of an accident in an area without surveillance based on an accident estimation algorithm analyzing the information gathered. The data from the VDS is transmitted as metadata in sync with the 3D Geographic Information System (GIS) engine so that the operator using the console can easily identify the problem area and take appropriate action.



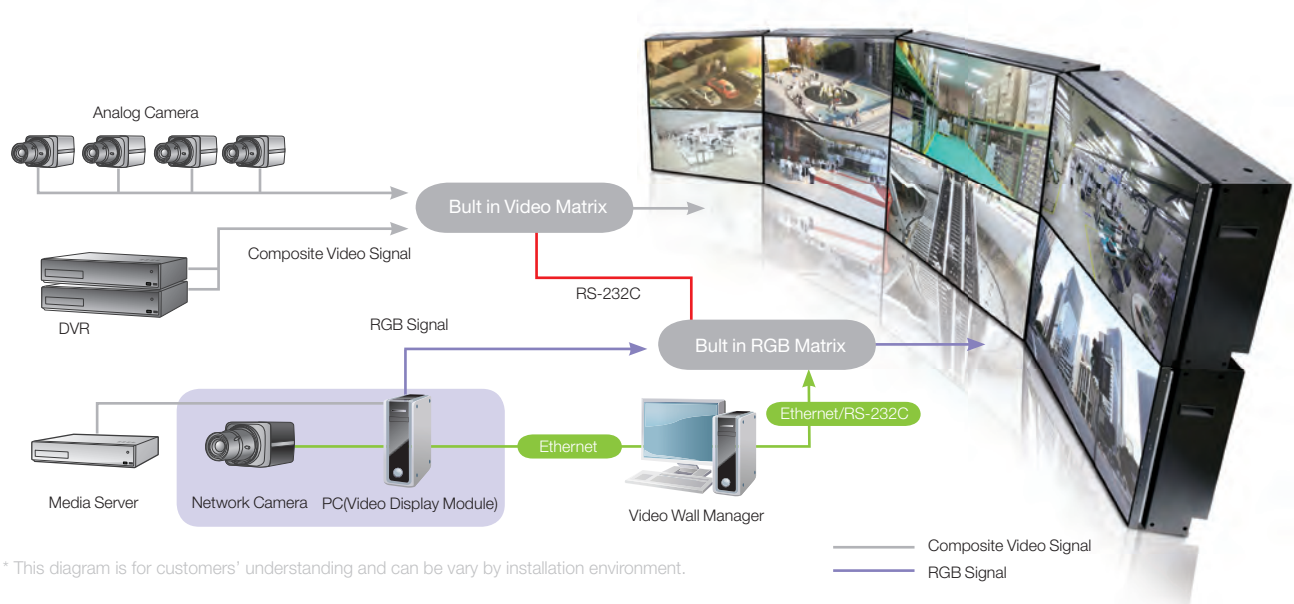
3D Video Detection Algorithm

By using a 3D detection algorithm which detects occurrences of abnormal driving such as vehicles driving along the hard shoulder, illegally stopping or driving the wrong way along a highway, operators can be pro-actively alerted and take appropriate action.



Video Wall

The video wall is a set of LCD modules that can be arranged to form a medium to large sized video wall. Compared to conventional DLP video walls that project video onto the screen, LCD modules provide a much sharper and more vivid image that can be viewed easily in bright conditions.



Easy to install and maintain

The video wall system is made up of a block structure to ease installation. Simply connecting block to block the perfect configuration can be achieved with no additional frame needed for supporting the panels. Each individual monitor in the video wall opens from both the front and the rear (open type) to provide unrestricted access to cables and component parts. A matrix switcher is installed inside the video wall to ensure a neat installation..

Super narrow bezel resulting in very small seams

The video wall system adopts a super narrow bezel so that the distance between panels is just 6.7mm. This greatly helps the integrity of an image when displaying one input source over multiple panels.

Easy and powerful control

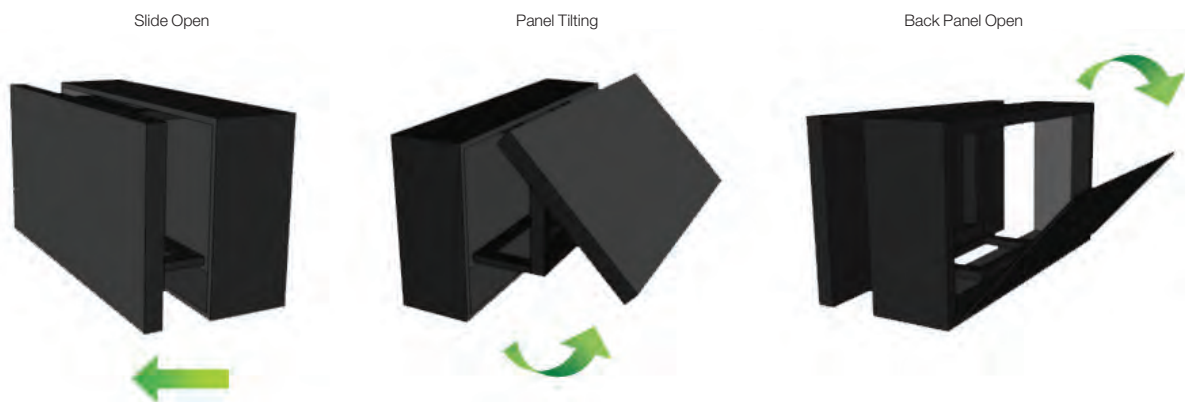
The control tool for the video wall system is easily installed and all functions operated with a simple mouse click. Output sources can be selected from various signal formats including composite video and RGB etc. The image can be zoomed in and out and adjustments to the brightness and color balance allow the perfect set-up. The video wall system can be controlled via Ethernet and RS-232C communications and a scenario feature enables the output of a desired video feed, or feeds, at certain times during the day and night.

Video Wall

Super Narrow Bezel resulting in very small seams



Easy to install and maintain



Display switching function

Each incoming video signal has a unique address and the control board inside the video wall system is also given a unique address. The matrix switcher transfers the video signal to the control board with the corresponding address according to commands from the control software - then, the control board transfers the video signal to the panel.

Zoom function

Upon receiving a command by the control software to enlarge one video source to 4 panels, the matrix switcher will transfer the same video signal to the control board in the applicable area. In the meantime, the control software commands the control board (inside the video wall system) to transfer the enlarged video signal. Then, the control board scans the video signal before transferring to the panel. As such, operators can use the control software to display an enlarged video source over multiple panels.

Security Robot

Intelligent Surveillance & Security Guard Robot

The Intelligent Surveillance & Security Guard Robot has a capability of detecting, tracking and suppression for the intruder in sync with multiple sensors such as intelligent cameras and ground surveillance radars. Even in inclement weather, the innovative technologies provide the ultimate protection from invasion.



Key Features

- Surveillance capability

The SGR series contain both a low light optical camera and thermal camera for uninterrupted 24/7 detection in all weather conditions.

- Fast and accurate Servo system

The SGR series' servo motor technology ensures extreme reliability, giving pinpoint accuracy, stable tracking and quiet operation of fast moving targets.

- Diverse options

The multiple modular options, such as; laser range finder, laser illuminator, GPS and digital compass connect to the SGR series together they can be integrated into existing security surveillance systems, a standalone system or even as part of a network.

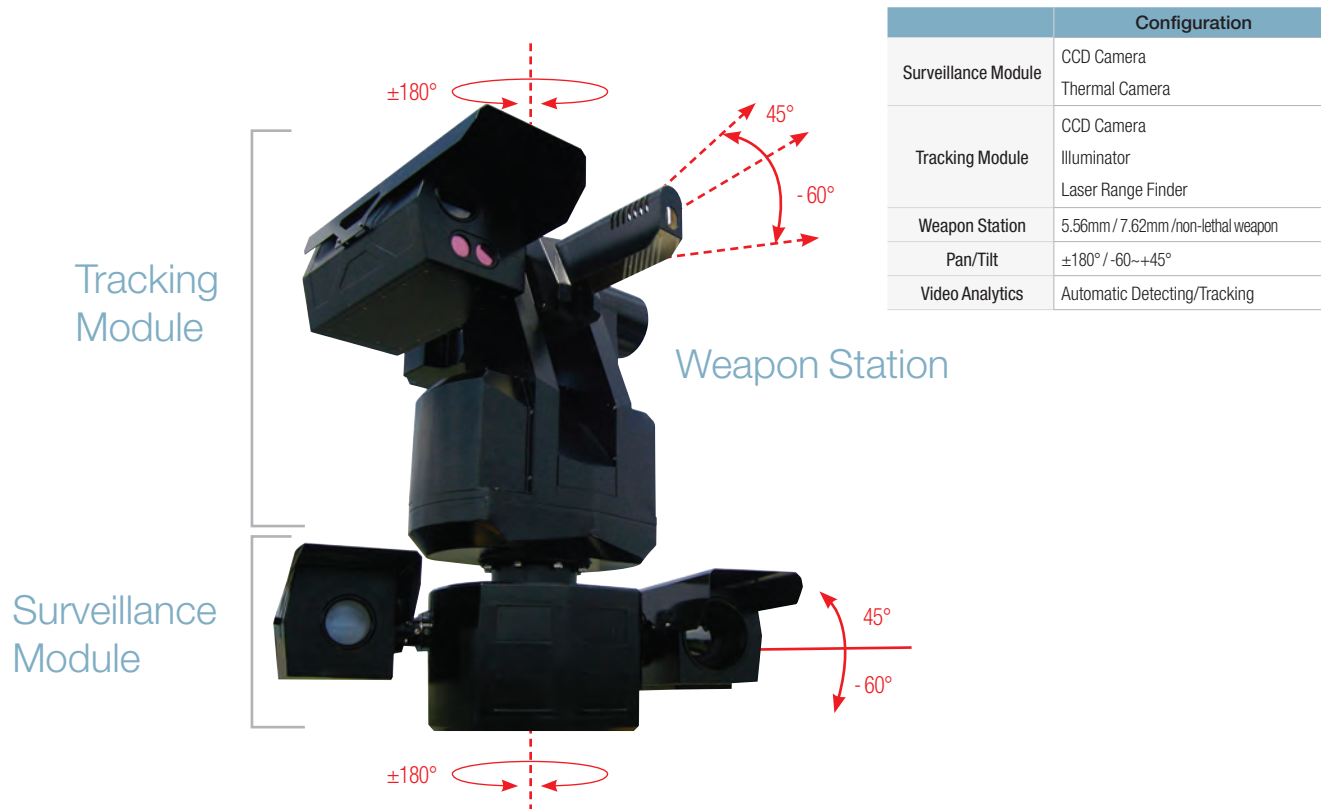
- Rugged structure

Extremely reliable mechanical structure provide 24/7 all year round operation capability, even under harsh environmental conditions.

Security Robot

SGR -1

The SGR-1's tracking and surveillance modules operate independently of each other. This allows targets to be tracked while the surveillance module continues to search for other targets. With the SGR-1, there are no blind spots.



Detection and tracking of a target

To provide a highly effective system, the surveillance system and tracking system of the SGR-1 can detect and track a moving target autonomously.

Weapon system

For an immediate response to intrusion, the weapon system can have a 5.56mm or 7.62mm weapon or non-lethal weapon mounted, such as an acoustic device or HID beam. The weapon system, operated remotely, can provide quick and accurate suppression whilst security teams are en-route to the incident.

Security Robot

SGR -2, SGR-3

The SGR-2 (medium range) and SGR-3 (long range) security robots feature ultra-low illumination cameras, thermal imaging cameras and selectable options such as laser range finder, Illuminator, search light. Multiple types of cameras and options can be added according to the requirement of the site. The compact, but high-performance platform can be used in either fixed or mobile applications.

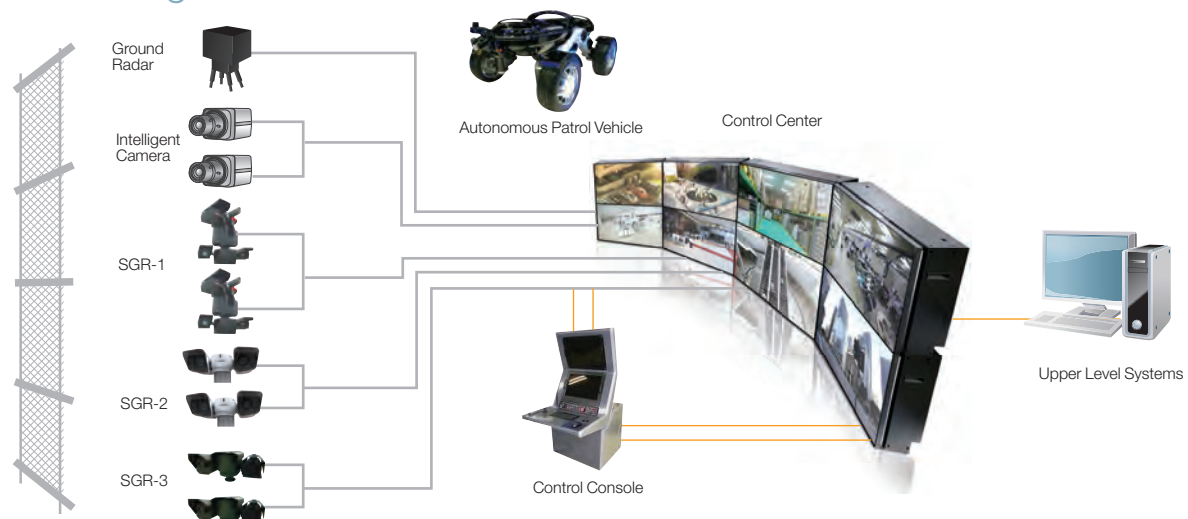


	Specifications
Size	770 x 318 x 400 (SGR-2) / 830 x 380 x 640 (SGR-3) [W/H/D]mm
Weight	Weight : 37.5kg (SGR-2) / 50kg (SGR-3) *including camera, Thermal camera
Pan/Tilt	Pan : 360° Endless / Tilt : -60° ~ +60° (SGR-2), -80° ~ +80° (SGR-3)
Resolution	0.04 °
Options	Laser Range Finder, Laser Illuminator, Searchlight
Operating Temperature	-32℃ ~ 63℃
Operating Humidity	20 ~ 90% RH

Security Robot

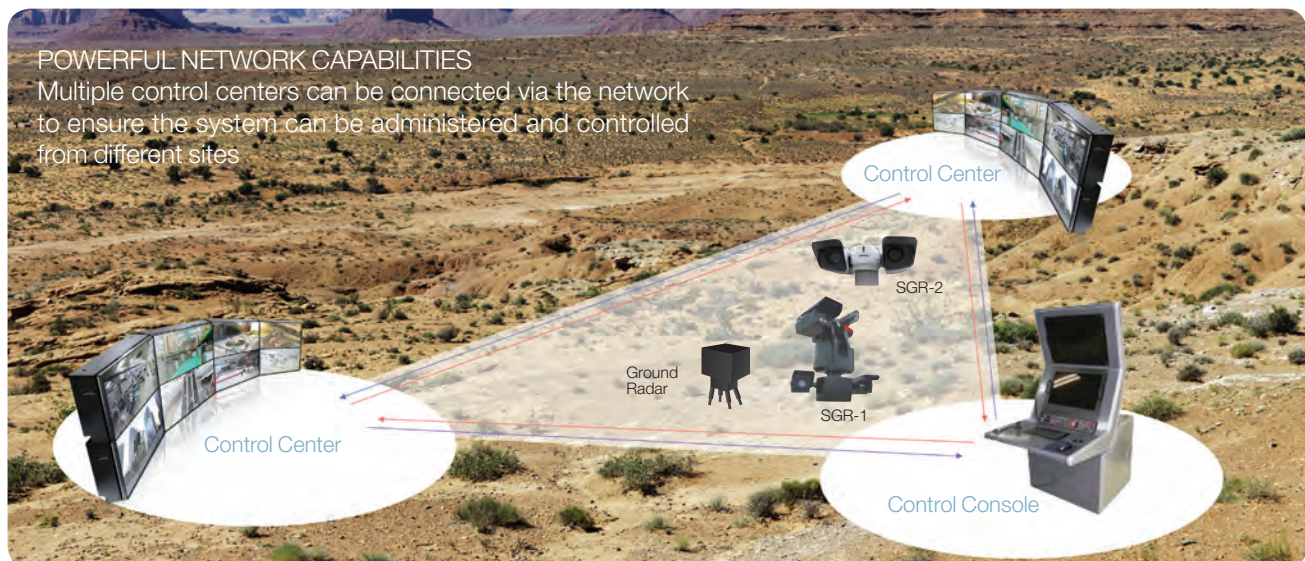
Samsung Techwin's security robots provide an integrated security system based on a proven solution that can be used in many applications. To implement a high-level standard of security, it can be integrated with various surveillance systems for autonomous target detecting, tracking and suppression effectively.

System Design



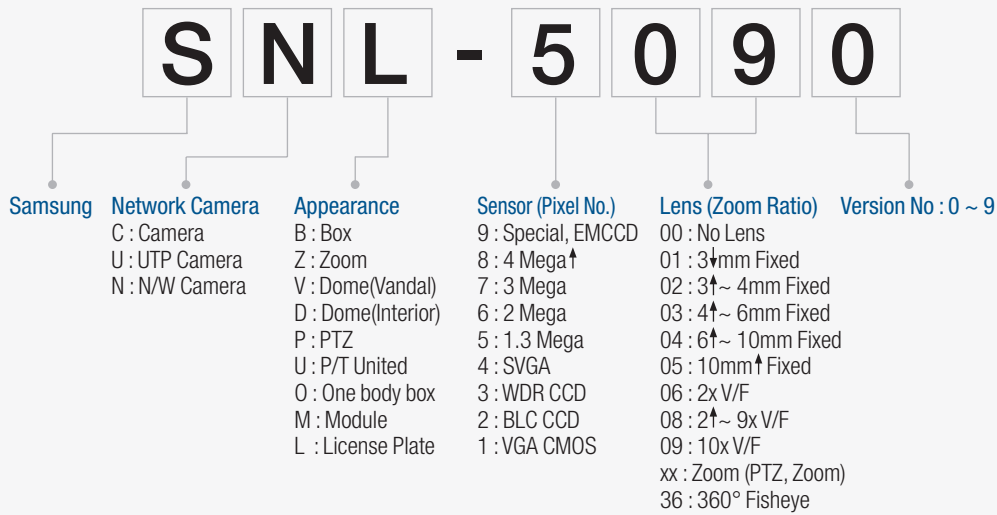
Advantages

- Extremely effective remote surveillance solutions
- Gives an immediate response to threats
- Directs strike teams to problem areas, rather than relying on patrols
- Reduces potential treats
- Minimizes man power

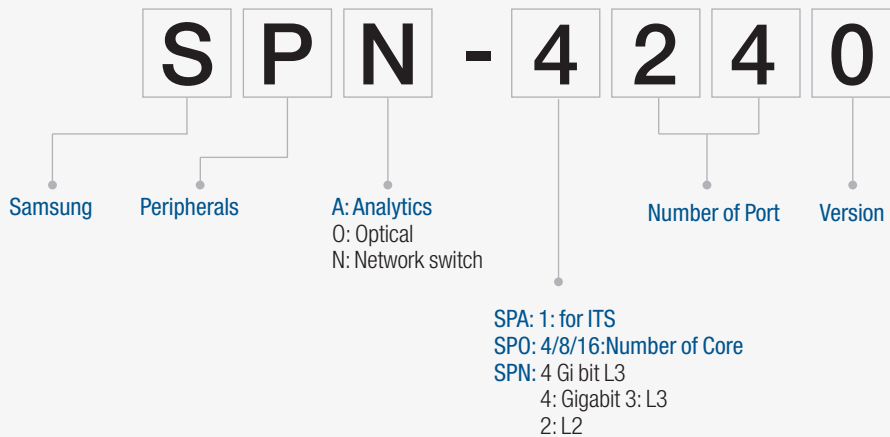


Product Numbering Rule

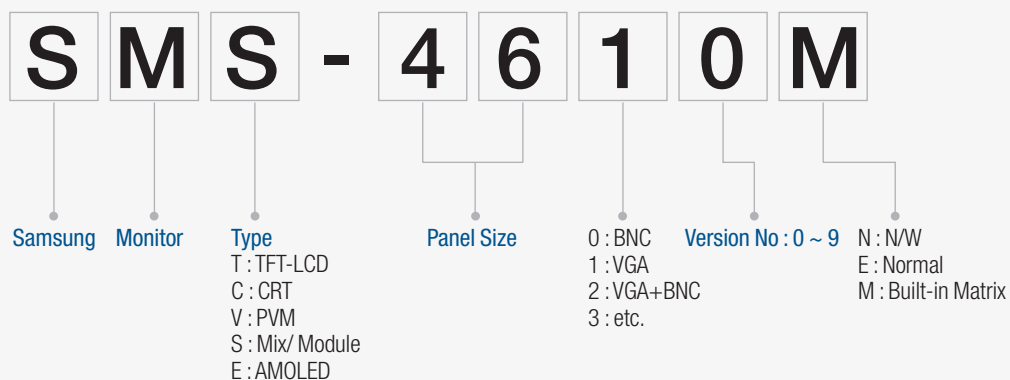
Network Camera



Peripherals



Monitor



DEVICES

Input/Output

Transmission / Control / Analytics

Peripheral

Recommended Devices



SNL-5090
SNB-7000
SNB-5000
SNB-3000
SNB-2000
SNB-1000
SNZ-5200
SNO-5080R
SND-7080/7080F
SND-5080/5080F
SND-3080C/3080CF
SND-3080/3080F
SND-1010
SND-7080
SNV-5080
SNV-5010
SNV-3120
SNV-3080
SNP-5200/5200H
SNP-3430H
SNP-3370TH
SNP-3370TH/3301H
SNP-3370/3301
SNP-3120/3120V/3120VH
SCB-9050/9051
SCU-9051
SPE-400B/1600R
SPE-400
SPE-100
SMS-4600M/4610M/4620

SNL-5090

High Accuracy and Fast ANPR Camera



Key Features

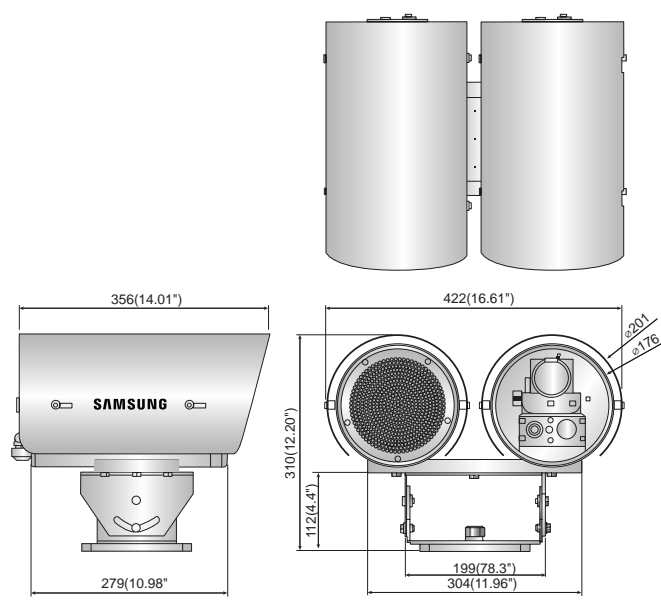
- Detect license number per lane, that will be stored in the controller storage and transferred to the server
- Real-time Image transfer
(BayerGR8, BayerGR12, YUV422, YUV411)
- Remote control (power, illumination, camera control)
- Clear night vision using highperformance IR indicator

Technical Specifications

SNL-5090	
Camera	
Image Sensor	1.4 Mega Pixel Progressive Scanning 2/3" CCD
Picture size	1388(H) X 1040(V)
FPS	30fps
Trigger Edge	Rising Edge or Falling Edge
Gain Control	0~18dB(Manual or Auto)
Shutter Speed	1μsec~3600sec
S/N Ratio	56dB Better
Control Functions	Brightness, Sharpness, Gamma, Auto-Exposure, Auto-Gain, Auto-Shutter, (*U/B, V/R, Hue/G (digital gain), Auto White Balance)
Lens	
Format Size	1/2"
Focal Length	8.0-80mm
Iris Range	1.6 – Approx. 360
Zoom Ratio	Zoom Ratio 10X C-Mount Lens
Laser Sensing Detector	Beam Structure Single Type, Detection Time 5ms Measurement Range 10 – 25m, Wavelength 905nm Power Supply 12V 300mA
IR Lamp & Controller	
Wave Length	740nm Infrared Lamp
Input	12Vdc Max 10A
Output	12V Max 33A Max Output Pulse 2msec Max Output Frequency 100Hz
Power Supply Device	
Input	AC 85~ 264V
Output	12V 8.3A
Camera Housing	Material Aluminum, Coating Glass(for IR) Bracket & Angle Adjuster
Gigabit Ethernet Card & Hub	RJ-45 10BASE-T/100BASE-TX/1000BASE-TX

Dimensions

Unit : mm (inch)



SNB-7000

3Megapixel Full HD Network Camera

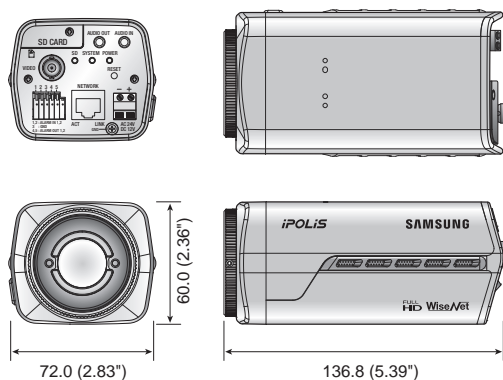


Key Features

- Max. 3M (2048 x 1536) resolution
- 16 : 9 Full HD (1080p) resolution support
- H.264, MJPEG dual codec
- WDR (supported in 2M mode only)
- Smart compression (ROI encoding)

Dimensions

Unit : mm (inch)

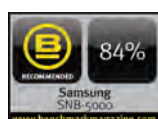


Technical Specifications

SNB-7000N/P	
VIDEO	
Imaging Device	1/2.8" 3M PS CMOS
Total Pixels	2,144(H) x 1,588(V)
Effective Pixels	2,096(H) x 1,561(V)
Scanning System	Progressive
Min. Illumination (TBD)	Color : 1Lux (F1.2, 50IRE), 0.017Lux (Sens-up 60x) B/W : 0.08Lux (F1.2, 50IRE), 0.001Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Lens Type	Manual / DC auto iris
Mount Type	C / CS
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W / External B/W
Backlight Compensation	Off / BLC / HLC / WDR
Wide Dynamic Range	(*2M mode only), 52dB
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (1ea 4 point polygonal + 16ea rectangular zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Alarm I/O	Input 1ea / Output 1ea (Relay)
Remote Control Interface	RS-485
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Sungjin
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MJPEG
Resolution	3M mode - H.264 : Max. 20fps at all resolutions MJPEG : 800 x 600 ~ 320 x 180 - 20fps 1280 x 1024 ~ 1600 x 1200 - 15fps 1920 x 1080 ~ 2048 x 1536 - 10fps
	2M mode - H.264 : Max. 30fps at all resolutions (When WDR on, Max. framerate is Max. 15fps.) MJPEG : 800 x 600 ~ 320 x 180 - 30fps 1280 x 1024 ~ 1920 x 1080 : 15fps
	Max. Framerate
	3M mode : Max. 20fps, 2M mode : Max. 30fps * When WDR on, Max. framerate is Max. 15fps
Smart Codec	Yes (Area based method, Face detection method)
Video Quality Adjustment	H.264 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 6 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 7.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 7W
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")
Weight	440g (0.97 lb)

SNB-5000

1.3Megapixel HD Network Camera

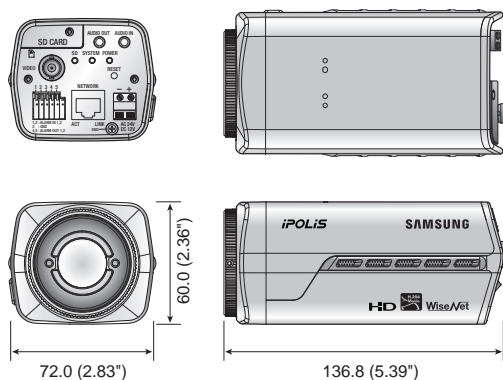


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

SNB-5000N/P	
VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux (F1.2, 50IRE), 0.005Lux (Sens-up 60x) B/W : 0.01Lux (F1.2, 50IRE), 0.0002Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Lens Type	Manual / DC auto iris
Mount Type	C / CS
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (12 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720P (HD), 800 x 600, 640 x 480, 320 x 240
Max. Framerate	22fps (1280 x 1024), 30fps (720P HD)
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 6W
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")
Weight	440g (0.97 lb)

SNB-3000

4CIF WDR Network Camera

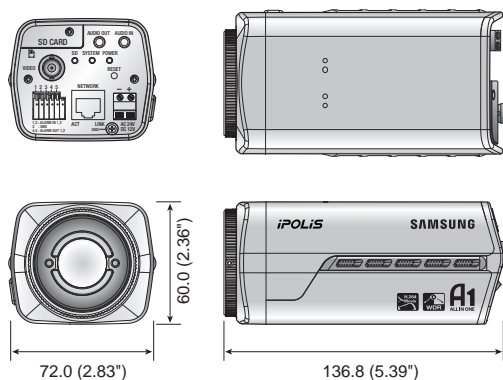


Key Features

- Max. 30(25)fps at 4CIF resolution
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

	SNB-3000N	SNB-3000P
VIDEO		
Imaging Device	1/3" Super HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.04Lux (F1.2, 50IRE), 0.0001Lux (Sens-up 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Lens Type	Manual / DC auto iris	
Mount Type	C / CS	
OPERATIONAL		
On Screen Display	English, French, Spanish, Portuguese, Japanese	English, French, German, Spanish, Italian, Chinese
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto / Day / Night (IR cut filter)	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones, 4 point polygonal method)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	AGC (Low / Middle / High)	
White Balance	ATW1 / ATW2 / AWC / 3200K / 5600K	
Electronic Shutter Speed	Off / Auto (1/100 ~ 1/10Ksec)	Off / Auto (1/120 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
Profile	Standard / ITS / Backlight / Day & Night / Gaming / Custom	
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear	
PIP	Off / On	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 8W	
MECHANICAL		
Color / Material	Silver / Metal	
Dimensions (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")	
Weight	300g (0.66 lb)	

SNB-2000

4CIF Network Camera

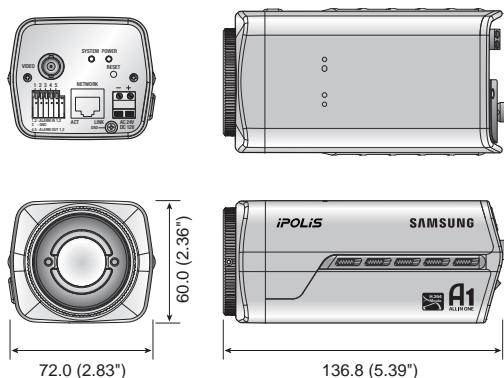


Key Features

- Max. 30(25)fps at 4CIF resolution
- H.264, MPEG-4, MJPEG multiple codec
- PoE

Dimensions

Unit : mm (inch)



Technical Specifications

	SNB-2000N	SNB-2000P
VIDEO		
Imaging Device	1/3" Super HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Lens Type	Manual / DC auto iris	
Mount Type	C / CS	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto / Day / Night (Software method)	
Backlight Compensation	Off / BLC	
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones, 4 point polygonal method)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	AGC (Low / Middle / High)	
White Balance	ATW1 / ATW2 / AWC / 3200K / 5600K	
Electronic Shutter Speed	Off / Auto (1/100 ~ 1/10Ksec)	Off / Auto (1/120 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
Profile	Standard / ITS / Backlight / Day & Night / Gaming / Custom	
PIP	Off / On	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
ONVIF Conformance	Yes	
Web Language	English, French, German, Spanish, Italian, Chinese, Korean	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10℃ ~ +50℃ (+14℉ ~ +122℉) / 20% ~ 80% RH	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 7W	
MECHANICAL		
Color / Material	Silver / Metal	
Dimensions (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")	
Weight	300g (0.66 lb)	

SNB-1000

VGA Network Camera

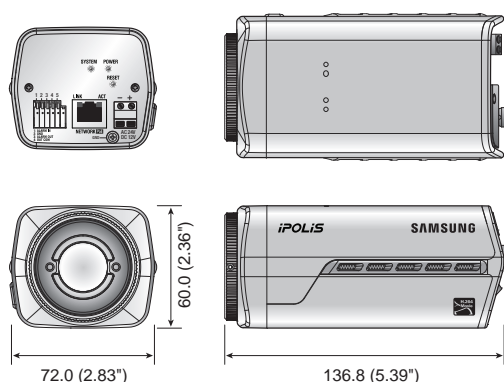


Key Features

- Max. 30(25)fps at VGA resolution
- H.264, MPEG-4, MJPEG multiple codec
- Multiple streaming simultaneously

Dimensions

Unit : mm (inch)



Technical Specifications

	SNB-1000N		SNB-1000P
VIDEO			
Imaging Device	1/4" PS CMOS		
Total Pixels	656(H) x 488(V)		
Effective Pixels	640(H) x 480(V)		
Scanning System	Progressive		
Min. Illumination	Color : 1.4Lux (F1.2, 50IRE), 0.18Lux (Sens-up 8x)		
S / N Ratio	50dB		
LENS			
Lens Type	Fixed iris		
Mount Type	C / CS		
OPERATIONAL			
Day & Night	Auto		
Motion Detection	Off / On (4 programmable zones)		
Sens-up (Frame Integration)	Off / Auto (2x ~ 8x)		
Gain Control	2x, 4x, 8x, 16x, 32x		
White Balance	Auto / Manual		
Flip / Mirror	Off / On		
Alarm I/O	Input 1ea / Output 1ea (Relay)		
NETWORK			
Ethernet	RJ-45 (10/100BASE-T)		
Video Compression Format	H.264, MPEG-4, MJPEG		
Resolution	640 x 480, 320 x 240		
Max. Framerate	30fps	25fps	
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control		
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR		
Streaming Capability	Multiple streaming (Up to 10 profiles)		
IP	IPv4, IPv6		
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF		
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x Authentication		
Streaming Method	Unicast / Multicast		
Max. User Access	5 users at unicast mode		
ONVIF Conformance	Yes		
Webpage Language	English, French, German, Spanish, Italian, Korean Chinese, Russian, Japanese, Danish, Swedish, Portuguese		
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari		
Central Management Software	NET-i viewer		
ENVIRONMENTAL			
Operating Temperature / Humidity	0°C ~ +50°C (+32°F ~ +122°F) / 20% ~ 80% RH		
ELECTRICAL			
Input Voltage / Current	12V DC, 500mA / PoE (IEEE802.3af)		
Power Consumption	Max. 2.5W		
MECHANICAL			
Color / Material	Silver / Metal		
Dimensions (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")		
Weight	370g (0.82 lb)		

SNZ-5200

1.3Megapixel HD 20x Network Zoom Camera

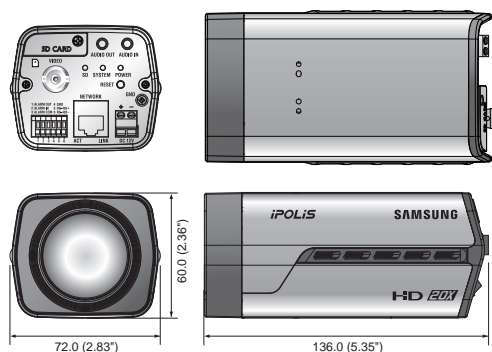


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- 4.45 ~ 89mm (20x) optical zoom, 16x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

SNZ-5200N/P

VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 0.7Lux (F1.2, 50IRE), 0.01Lux (Sens-up 60x, 50IRE) B/W : 0.08Lux (F1.6, 50IRE), 0.001Lux (Sens-up 60x, 50IRE)
S / N Ratio	52dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	4.45 ~ 89mm (20x)
Max. Aperture Ratio	F1.6(Wide) / F2.9(Tele)
Angular Field of View	H : 56.56°(Wide) ~ 3.10°(Tele) / V : 43.32°(Wide) ~ 2.34°(Tele)
Min. Object Distance	1m (3.28ft)
Focus Control	AF / One-shot AF / Manual (Remote control via Network)
Lens Type	DC auto iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Preset	128ea
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Digital Image Stabilization	Off / On
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (8 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Digital Zoom	16x
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
Remote Control Interface	RS-485
RS-485 Protocol	Samsung-T/E, Pelco-P/D
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720p (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240
Max. Framerate	30fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20 ~ 80% RH
ELECTRICAL	
Input Voltage / Current	12V DC, PoE (IEEE802.3af)
Power Consumption	12V DC : Max. 8W, PoE : Max. 7.5W
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxHxD)	72.0 x 60.0 x 136.0mm (2.83" x 2.36" x 5.35")
Weight	540g (1.19 lb)

SNO-5080R

1.3Megapixel HD Weatherproof Network IR Camera

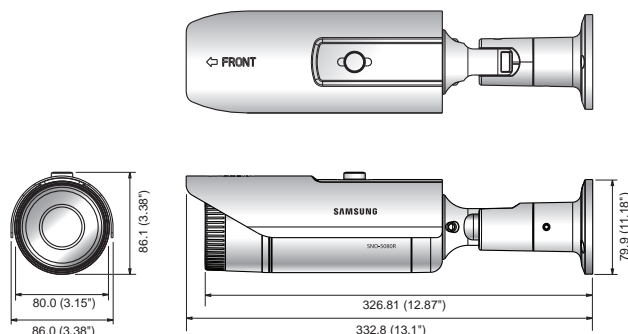


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- 2.8 ~ 10mm (3.6x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- IR LED (31ea), PoE

Dimensions

Unit : mm (inch)



Technical Specifications

SNO-5080RN/P

VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux (F1.2, 50IRE), 0.005Lux (Sens-up 60x) B/W : 0Lux (F1.2, 50IRE, IR LED on)
S / N Ratio	50dB
Video Output	DIP connector type, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 10mm (3.6x) Vari-focal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)
Focus Control	Manual
Lens Type	DC auto iris
Mount Type	Board-in type
OPERATIONAL	
IR LED	31ea
Viewable Length	30m
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (12 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720P (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240
Max. Framerate	22fps (1280 x 1024), 30fps (720P HD)
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / Less than 90% RH
Ingress Protection	IP66 Grade (Waterproof)
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 11W
MECHANICAL	
Color / Material	Dark gray / Metal
Dimensions (WxHxD)	86.0 x 86.1 x 332.8mm (3.39" x 3.39" x 13.1")
Weight	1.3Kg (2.87 lb)

SND-7080/7080F

3Megapixel Full HD Network Dome Camera

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SND-7080

SND-7080F



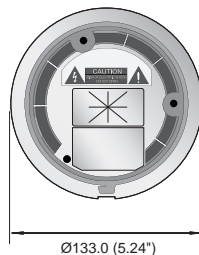
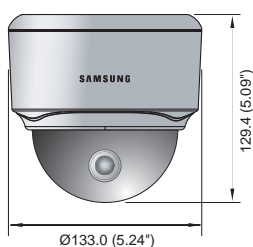
Key Features

- Max. 3M (2048 x 1536) resolution
- 16 : 9 Full HD (1080p) resolution support
- 3 ~ 8.5mm (2.8x) motorized varifocal lens
- H.264, MJPEG dual codec
- WDR (supported in 2M mode only)
- Smart compression (ROI encoding)

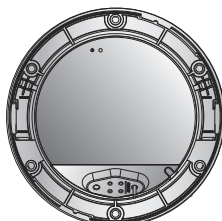
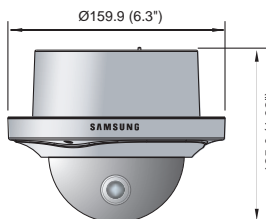
Dimensions

Unit : mm (inch)

SND-7080



SND-7080F



Technical Specifications

SND-7080(F)N/P

VIDEO	
Imaging Device	1/2.8" 3M PS CMOS
Total Pixels	2,144(H) x 1,588(V)
Effective Pixels	2,096(H) x 1,561(V)
Scanning System	Progressive
Min. Illumination (TBD)	Color : 1Lux (F1.2, 50IRE), 0.017Lux (Sens-up 60x) B/W : 0.08Lux (F1.2, 50IRE), 0.001Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	3 ~ 8.5mm (2.8x) Motorized vari-focal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 100°(Wide) ~ 35.3°(Tele), V : 74.6°(Wide) ~ 26°(Tele)
Min. Object Distance	0.5m (1.64ft)
Focus Control	Remote control via network (Manual, One-shot AF)
Lens Type	DC auto iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Pan Range	0° ~ 355°
Tilt Range	0° ~ 90°
Rotate Range	0° ~ 355°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W / External B/W
Backlight Compensation	Off / BLC / HLC / WDR
Wide Dynamic Range	(* 2M mode only), 52dB
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR3 (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (1ea 4 point polygonal + 16ea rectangular zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MJPEG
Resolution	3M mode - H.264 : Max. 20fps at all resolutions MJPEG : 800 x 600 ~ 320 x 180 - 20fps 1280 x 1024 ~ 1600 x 1200 - 15fps 1920 x 1080 ~ 2048 x 1536 - 10fps 2M mode - H.264 : Max. 30fps at all resolutions (When WDR on, Max. framerate is Max. 15fps) MJPEG : 800 x 600 ~ 320 x 180 - 30fps 1280 x 1024 ~ 1920 x 1080 : 15fps
Max. Framerate	3M mode : Max. 20fps, 2M mode : Max. 30fps * When WDR on, Max. framerate is Max. 15fps
Smart Codec	Yes (Area based method, Face detection method)
Video Quality Adjustment	H.264 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 6 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 7.0 or Higher, Firefox, Google Chrome, Apple Safari NET-i viewer
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 7W
MECHANICAL	
Color / Material	Ivory / Plastic
Dimensions (WxH)	SND-7080 : Ø133.0 x 129.4mm (Ø5.24" x 5.09") SND-7080F : Ø159.9 x 125.0mm (Ø6.3" x 4.92") (Flush mounting type)
Weight	SND-7080 : 700g (1.54 lb), SND-7080F : 800g (1.76 lb)

SND-5080/5080F

1.3Megapixel HD Network Dome Camera

iPOLiS



SND-5080

SND-5080F

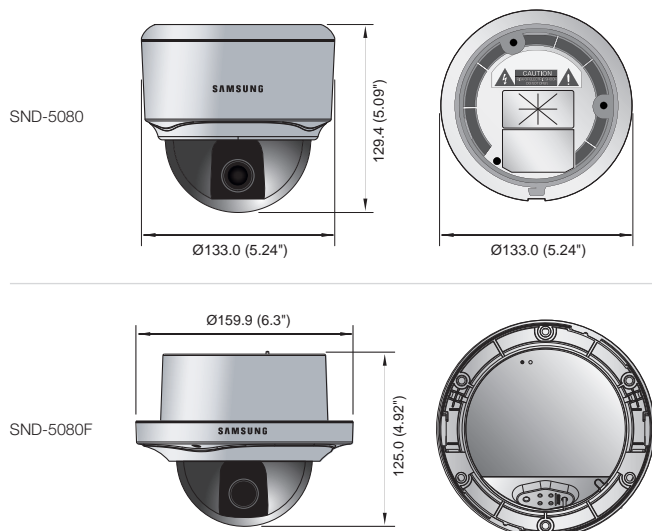


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- 2.8 ~ 10mm (3.6x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

SND-5080(F)N/P

VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux (F1.2, 50IRE), 0.005Lux (Sens-up 60x) B/W : 0.01Lux (F1.2, 50IRE), 0.0002Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 10mm (3.6x) Vari-focal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)
Lens Type	DC auto iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Pan Range	0° ~ 355°
Tilt Range	0° ~ 90°
Rotate Range	0° ~ 355°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (12 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720P (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240
Max. Framerate	22fps (1280 x 1024), 30fps (720P HD)
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 7W
MECHANICAL	
Color / Material	White / Plastic
Dimensions (WxH)	SND-5080 : Ø133.0 x 129.4mm (Ø5.24" x 5.09") SND-5080F : Ø159.9 x 125.0mm (Ø6.3" x 4.92") (Flush mounting type)
Weight	SND-5080 : 523g (1.15 lb), SND-5080F : 650g (1.43 lb)

SND-3080C/3080CF

4CIF People Counting Network Dome Camera

iPOLiS



SND-3080C

SND-3080CF



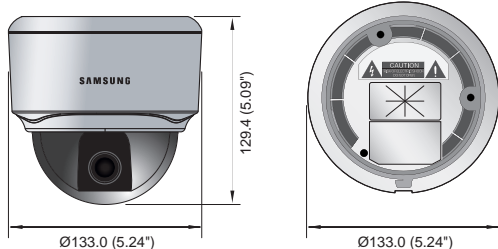
Key Features

- Max. 30(25)fps at 4CIF resolution
- 2.8 ~ 11mm (3.9x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, people counting

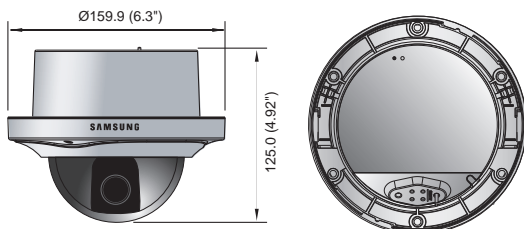
Dimensions

Unit : mm (inch)

SND-3080C



SND-3080CF



Technical Specifications

	SND-3080C(F)N	SND-3080C(F)P
VIDEO		
Imaging Device	1/3" Super HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	2.8 ~ 11mm (3.9x) Vari-focal	
Max. Aperture Ratio	F1.2	
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	0° ~ 355°	
Tilt Range	0° ~ 90°	
Rotate Range	0° ~ 355°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto / Day / Night (Software method)	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones, 4 point polygonal method)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	AGC (Low / Middle / High)	
White Balance	ATW1 / ATW2 / AWC / 3200K / 5600K	
Electronic Shutter Speed	Off / Auto (1/100 ~ 1/10Ksec)	Off / Auto (1/120 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
Profile	Standard / ITS / Backlight / Day & Night / Gaming / Custom	
Intelligent Video Analytics	People counting (Line-based counting, Area-based counting)	
PIP	Off / On	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 7W	
MECHANICAL		
Color / Material	White / Plastic	
Dimensions (WxH)	SND-3080C : Ø133.0 x 129.4mm (Ø5.24" x 5.09") SND-3080CF : Ø159.9 x 125.0mm (Ø6.3" x 4.92") (Flush mounting type)	
Weight	SND-3080C : 523g (1.15 lb), SND-3080CF : 650g (1.43 lb)	

SND-3080/3080F

4CIF WDR Network Dome Camera

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SND-3080

SND-3080F

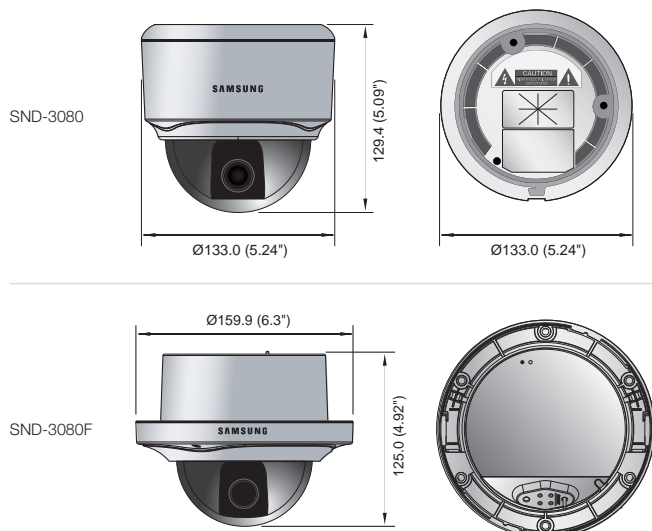


Key Features

- Max. 30(25)fps at 4CIF resolution
- 2.8 ~ 11mm (3.9x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory

Dimensions

Unit : mm (inch)



Technical Specifications

	SND-3080(F)N	SND-3080(F)P
VIDEO		
Imaging Device	1/3" Super HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	2.8 ~ 11mm (3.9x) Vari-focal	
Max. Aperture Ratio	F1.2	
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	0° ~ 355°	
Tilt Range	0° ~ 90°	
Rotate Range	0° ~ 355°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto / Day / Night (Software method)	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones, 4 point polygonal method)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	AGC (Low / Middle / High)	
White Balance	ATW1 / ATW2 / AWC / 3200K / 5600K	
Electronic Shutter Speed	Off / Auto (1/100 ~ 1/10Ksec)	Off / Auto (1/120 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
Profile	Standard / ITS / Backlight / Day & Night / Gaming / Custom	
PIP	Off / On	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 7W	
MECHANICAL		
Color / Material	White / Plastic	
Dimensions (WxH)	SND-3080 : Ø133.0 x 129.4mm (Ø5.24" x 5.09") SND-3080F : Ø159.9 x 125.0mm (Ø6.3" x 4.92") (Flush mounting type)	
Weight	SND-3080 : 523g (1.15 lb), SND-3080F : 650g (1.43 lb)	

SND-1010

VGA Network Dome Camera

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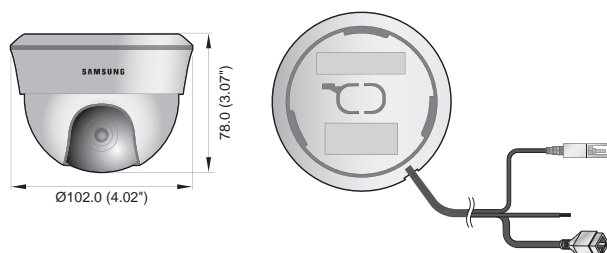


Key Features

- Max. 30(25)fps at VGA resolution
- Built-in 2.9mm fixed lens
- H.264, MPEG-4, MJPEG multiple codec
- Multiple streaming simultaneously

Dimensions

Unit : mm (inch)



Technical Specifications

	SND-1010N		SND-1010P
VIDEO			
Imaging Device	1/4" PS CMOS		
Total Pixels	656(H) x 488(V)		
Effective Pixels	640(H) x 480(V)		
Scanning System	Progressive		
Min. Illumination	Color : 1.4Lux (F1.2, 50IRE), 0.18Lux (Sens-up 8x)		
S / N Ratio	50dB		
LENS			
Focal Length (Zoom Ratio)	2.9mm		
Max. Aperture Ratio	F2.0		
Angular Field of View	H : 68°, V : 50°, D : 85°		
Lens Type	Fixed Iris		
Mount Type	Board-in type		
OPERATIONAL			
Day & Night	Auto		
Motion Detection	Off / On (4 programmable zones)		
Sens-up (Frame Integration)	Off / Auto (2x ~ 8x)		
Gain Control	2x, 4x, 8x, 16x, 32x		
White Balance	Auto / Manual		
Flip / Mirror	Off / On		
Alarm I/O	Input 1ea / Output 1ea (Relay)		
NETWORK			
Ethernet	RJ-45 (10/100BASE-T)		
Video Compression Format	H.264, MPEG-4, MJPEG		
Resolution	640 x 480, 320 x 240		
Max. Framerate	30fps	25fps	
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control		
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR		
Streaming Capability	Multiple streaming (Up to 10 profiles)		
IP	IPv4, IPv6		
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF		
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x Authentication		
Streaming Method	Unicast / Multicast		
Max. User Access	5 users at unicast mode		
ONVIF Conformance	Yes		
Webpage Language	English, French, German, Spanish, Italian, Korean Chinese, Russian, Japanese, Danish, Swedish, Portuguese		
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari		
Central Management Software	NET-i viewer		
ENVIRONMENTAL			
Operating Temperature / Humidity	0°C ~ +50°C (+32°F ~ +122°F) / 20% ~ 80% RH		
ELECTRICAL			
Input Voltage / Current	12V DC, 500mA / PoE (IEEE802.3af)		
Power Consumption	Max. 2.5W		
MECHANICAL			
Color / Material	White / Plastic		
Dimensions (WxH)	Ø102.0 x 78.0mm (Ø4.02" x 3.07")		
Weight	200g (0.44 lb)		

SNV-7080

iPOLiS

3Megapixel Full HD Vandal-Resistant Network Dome Camera

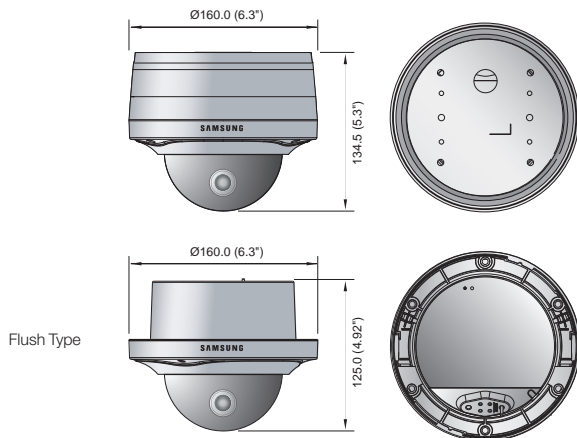


Key Features

- Max. 3M (2048 x 1536) resolution
- 16 : 9 Full HD (1080p) resolution support
- 3~8.5mm (2.8x) motorized varifocal lens
- H.264, MJPEG dual codec
- WDR (supported in 2M mode only)
- Smart compression (ROI encoding)

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBP-300WM SBP-300CM SBP-300HM1 SBP-300LM SBP-300PM SBP-300KM

Technical Specifications

	SNV-7080N/P
VIDEO	
Imaging Device	1/2.8" 3M PS CMOS
Total Pixels	2,144(H) x 1,588(V)
Effective Pixels	2,096(H) x 1,561(V)
Scanning System	Progressive
Min. Illumination (TBD)	Color : 1Lux (F1.2, 50IRE), 0.017Lux (Sens-up 60x) B/W : 0.08Lux (F1.2, 50IRE), 0.001Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	3 ~ 8.5mm (2.8x) Motorized vari-focal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 100°(Wide) ~ 35.3°(Tele), V : 74.6°(Wide) ~ 26°(Tele)
Min. Object Distance	0.5m (1.64ft)
Focus Control	Remote control via network (Manual, One-shot AF)
Lens Type	DC auto iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Pan Range	0° ~ 355°
Tilt Range	0° ~ 90°
Rotate Range	0° ~ 355°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W / External B/W
Backlight Compensation	Off / BLC / HLC / WDR
Wide Dynamic Range	(* 2M mode only), 52dB
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (1ea 4 point polygonal + 16ea rectangular zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MJPEG
Resolution	3M mode - H.264 : Max. 20fps at all resolutions MJPEG : 800 x 600 ~ 320 x 180 - 20fps 1280 x 1024 ~ 1600 x 1200 - 15fps 1920 x 1080 ~ 2048 x 1536 - 10fps 2M mode - H.264 : Max. 30fps at all resolutions (When WDR on, Max. framerate is Max. 15fps) MJPEG : 800 x 600 ~ 320 x 180 - 30fps 1280 x 1024 ~ 1920 x 1080 : 15fps
Max. Framerate	3M mode : Max. 20fps, 2M mode : Max. 30fps * When WDR on, Max. framerate is Max. 15fps
Smart Codec	Yes (Area based method, Face detection method)
Video Quality Adjustment	H.264 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 6 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 7.0 or Higher, Firefox, Google Chrome, Apple Safari NET-i viewer
Central Management Software	
ENVIRONMENTAL	
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / Less than 90% RH
Ingress Protection	IP66 Grade (Waterproof)
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 7W (Heater off), Max. 11W (Heater on)
MECHANICAL	
Color / Material	Ivory / Aluminum
Dimensions (WxH)	Ø160.0 x 134.5mm (Ø6.3" x 5.3")
Weight	1.4Kg (3.09 lb)

SNV-5080

1.3Megapixel HD Vandal-Resistant Network Dome Camera

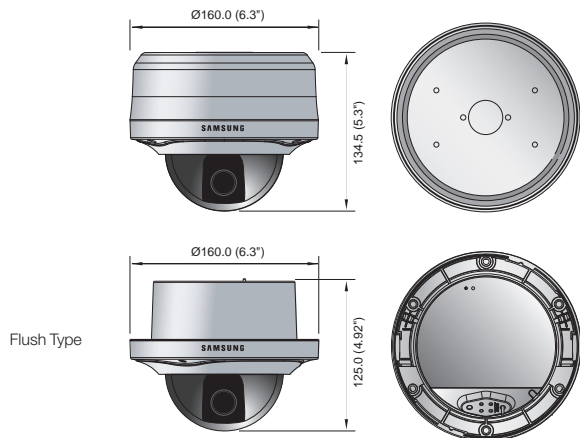


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- 2.8 ~ 10mm (3.6x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, IP66, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



SCX-300WM SCX-300CM SCX-300HM1 SCX-300LM SCX-300PM SCX-300KM

Technical Specifications

SNV-5080N/P

SNV-5080N/P	
VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux (F1.2, 50IRE), 0.005Lux (Sens-up 60x) B/W : 0.01Lux (F1.2, 50IRE), 0.0002Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	2.8 ~ 10mm (3.6x) Vari-focal
Max. Aperture Ratio	F1.2
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)
Lens Type	DC auto iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Pan Range	0° ~ 355°
Tilt Range	0° ~ 90°
Rotate Range	0° ~ 355°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR3 (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (12 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
Alarm I/O	Input 1ea / Output 1ea (Relay)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720P (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240
Max. Framerate	22fps (1280 x 1024), 30fps (720P HD)
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio I/O	Mic / Line in, Line out
Audio Compression Format	G.711 u-law
Audio Communication	Bi-directional audio
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
Memory Slot	SD/SDHC memory slot
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Supported OS	Windows XP / VISTA / 7, MAC OS
Supported Browser	Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / Less than 90% RH
Ingress Protection	IP66 Grade (Waterproof)
ELECTRICAL	
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)
Power Consumption	Max. 8W (Heater off), Max. 11W (Heater on)
MECHANICAL	
Color / Material	Light gray / Aluminum
Dimensions (WxH)	Ø160.0 x 134.5mm (Ø6.3" x 5.3")
Weight	1.28Kg (2.82 lb)

SNV-5010

iPOLiS

1.3Megapixel HD Vandal-Resistant Network Flat Camera

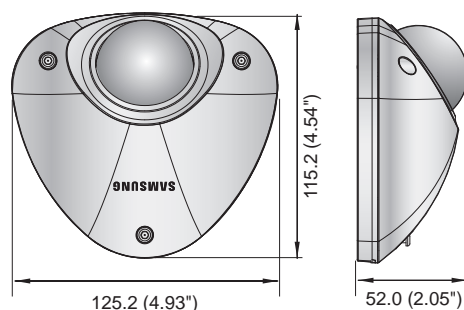


Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- Built-in 3mm fixed lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, IP66

Dimensions

Unit : mm (inch)



Technical Specifications

SNV-5010N/P	
VIDEO	
Imaging Device	1/3" 1.3M PS CMOS
Total Pixels	1,384(H) x 1,076(V)
Effective Pixels	1,329(H) x 1,049(V)
Scanning System	Progressive
Min. Illumination	Color : 1Lux (F1.8, 50IRE), 0.016Lux (Sens-up 60x)
S / N Ratio	50dB
Video Output	DIP connector, 704 x 480(N), 704 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	3mm
Max. Aperture Ratio	F1.8
Angular Field of View	H : 91.2°, V : 72.3°
Lens Type	Fixed iris
Mount Type	Board-in type
PAN / TILT / ROTATE	
Pan Range	-10° ~ 10°
Tilt Range	0° ~ 90°
OPERATIONAL	
Camera Title	Off / On (Displayed up to 15 characters)
Backlight Compensation	Off / BLC / HLC
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)
Digital Noise Reduction	SSNR3 (2D+3D noise filter) (Off / On)
Motion Detection	Off / On (4 programmable zones)
Privacy Masking	Off / On (12 programmable zones)
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)
Gain Control	Off / Low / Medium / High / Manual
White Balance	ATW / AWC / Manual / Indoor / Outdoor
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)
Flip / Mirror	Off / On
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear
NETWORK	
Ethernet	RJ-45 (10/100BASE-T)
Video Compression Format	H.264, MPEG-4, MJPEG
Resolution	1280 x 1024, 1280 x 720P (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240
Max. Framerate	22fps (1280 x 1024), 30fps (720P HD)
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log
Streaming Method	Unicast / Multicast
Max. User Access	10 users at unicast mode
ONVIF Conformance	Yes
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari
Central Management Software	NET-i viewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-10°C ~ +50°C (-14°F ~ +122°F) / Less than 90% RH
Ingress Protection	IP66 Grade (Waterproof)
ELECTRICAL	
Input Voltage / Current	12V DC, PoE (IEEE802.3af)
Power Consumption	Max. 6W
MECHANICAL	
Color / Material	Ivory / Aluminum
Dimensions (WxHxD)	125.2 x 52.0 x 115.2mm (4.93" x 2.05" x 4.54")
Weight	435g (0.96 lb)

SNV-3120

4CIF 12x Vandal-Resistant Network Dome Camera

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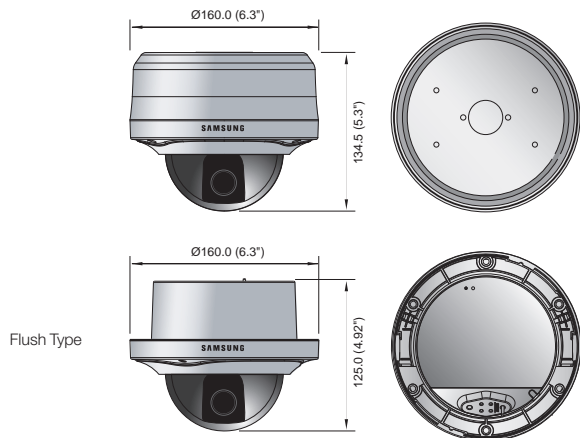


Key Features

- Max. 30(25)fps at 4CIF resolution
- 3.69 ~ 44.32mm (12x) optical zoom, 16x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, IP66, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



SCX-300WM SCX-300CM SCX-300HM1 SCX-300LM SCX-300PM SCX-300KM

Technical Specifications

	SNV-3120N	SNV-3120P
VIDEO		
Imaging Device	1/4" Ex-view HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (VPS on) (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.7Lux (F1.65, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.07Lux (F1.65, 50IRE), 0.0001Lux (Sens-up 512x)	
S / N Ratio	50dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	3.69 ~ 44.32mm (12x)	
Max. Aperture Ratio	F1.65(Wide) / F2.01(Tele)	
Angular Field of View	H : 54.44°(Wide) ~ 4.64°(Tele), V : 41.42°(Wide) ~ 3.52°(Tele)	
Min. Object Distance	0.2m (Wide) / 0.8m (Tele)	
Focus Control	AF / One-shot AF / Manual	
Lens Type	DC auto iris	
PAN / TILT / ROTATE		
Pan Range	0° ~ 355°	
Tilt Range	0° ~ 90°	
Rotate Range	0° ~ 355°	
Preset	12ea	
Preset Accuracy	±0.1°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	Off / Very Low / Low / Medium / High / Very High	
White Balance	ATW1 / ATW2 / AWC / Manual	
Electronic Shutter Speed	Off / Manual (1/100 ~ 1/10Ksec)	
Digital Zoom	16x	
Flip / Mirror	Digital flip	
VPS	Off / On	
Intelligent Video Analytics	Moved / Fixed	
Alarm I/O	Input 1ea / Output 1ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240, 320 x 240	704 x 576, 640 x 480, 352 x 288, 320 x 240
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Multiple streaming (Up to 10 profiles)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66 Grade (Waterproof)	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 8W (Heater off), Max. 11W (Heater on)	
MECHANICAL		
Color / Material	Light gray / Aluminum	
Dimensions (WxH)	Ø160.0 x 134.5mm (Ø6.3" x 5.3")	
Weight	1.5Kg (3.31 lb)	

SNV-3080

4CIF WDR Vandal-Resistant Network Dome Camera

iPOLiS

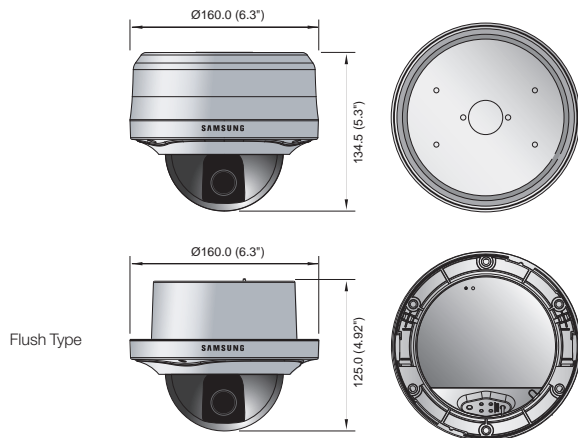


Key Features

- Max. 30(25)fps at 4CIF resolution
- 2.8 ~ 11mm (3.9x) varifocal lens
- H.264, MPEG-4, MJPEG multiple codec
- PoE, SD memory, IP66, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



SCX-300WM SCX-300CM SCX-300HM1 SCX-300LM SCX-300PM SCX-300KM

Technical Specifications

	SNV-3080N	SNV-3080P
VIDEO		
Imaging Device	1/3" Super HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.4Lux (F1.2, 50IRE), 0.001Lux (Sens-up 512x) B/W : 0.04Lux (F1.2, 50IRE), 0.0001Lux (Sens-up 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation	
LENS		
Focal Length (Zoom Ratio)	2.8 ~ 11mm (3.9x) Vari-focal	
Max. Aperture Ratio	F1.2	
Angular Field of View	H : 94.6°(Wide) ~ 28.8°(Tele), V : 68.4°(Wide) ~ 21.6°(Tele)	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	0° ~ 355°	
Tilt Range	0° ~ 90°	
Rotate Range	0° ~ 355°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 54 characters)	
Day & Night	Auto / Day / Night (IR cut filter)	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) - Off / Low / Middle / High	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Middle / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones, 4 point polygonal method)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	AGC (Low / Middle / High)	
White Balance	ATW1 / ATW2 / AWC / 3200K / 5600K	
Electronic Shutter Speed	Off / Auto (1/100 ~ 1/10Ksec)	Off / Auto (1/120 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
Profile	Standard / ITS / Backlight / Day & Night / Gaming / Custom	
Intelligent Video Analytics	Scene change, Virtual line, Enter / Exit, Appear / Disappear	
PIP	Off / On	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-40°C ~ +50°C (-40°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66 Grade (Waterproof)	
ELECTRICAL		
Input Voltage / Current	12V DC, 24V AC, PoE (IEEE802.3af)	
Power Consumption	Max. 8W (Heater off), Max. 11W (Heater on)	
MECHANICAL		
Color / Material	Light gray / Aluminum	
Dimensions (WxH)	Ø160.0 x 134.5mm (Ø6.3" x 5.3")	
Weight	1.28Kg (2.82 lb)	

SNP-5200/5200H

1.3Megapixel HD 20x Network PTZ Dome Camera



SNP-5200

SNP-5200H



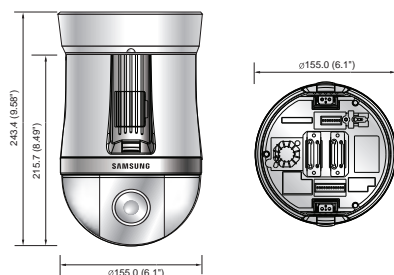
Key Features

- Max. 1.3M (1280 x 1024) resolution
- 16 : 9 HD (720p) resolution support
- 4.45 ~ 89mm (20x) optical zoom, 16x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- PoE plus, SD memory, IP66, bi-directional audio support

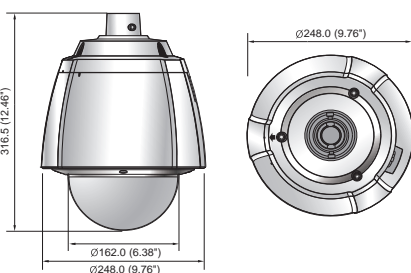
Dimensions

Unit : mm (inch)

SNP-5200



SNP-5200H



Accessories (Optional)



SBP-300WM1 SBP-300CM SBP-300HM1 SBP-300LM SBP-300PM SBP-300KM

Technical Specifications

	SNP-5200N/P	SNP-5200HN/HP
VIDEO		
Imaging Device	1/3" 1.3M PS CMOS	
Total Pixels	1,384(H) x 1,076(V)	
Effective Pixels	1,329(H) x 1,049(V)	
Scanning System	Progressive	
Min. Illumination	Color : 0.7Lux (F1.6, 50IRE), 0.01Lux (Sens-up 60x, 50IRE) B/W : 0.08Lux (F1.6, 50IRE), 0.001Lux (Sens-up 60x, 50IRE)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite, 704 x 480(N), 704 x 576(P), for installation	
LENS		
Focal Length (Zoom Ratio)	4.45 ~ 89mm (20x)	
Max. Aperture Ratio	F1.6(Wide) / F2.9(Tele)	
Angular Field of View	H : 56.56°(Wide) ~ 3.10°(Tele) / V : 43.32°(Wide) ~ 2.34°(Tele)	
Min. Object Distance	1m (3.28ft)	
Focus Control	AF / One-shot AF / Manual	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	360° Endless	
Pan Speed	Preset : 500°/sec, Manual : 0.024°/sec ~ 120°/sec	
Tilt Range	190°(-5° ~185°)	
Tilt Speed	Preset : 500°/sec, Manual : 0.024°/sec ~ 120°/sec	
Preset	255ea	
Preset Accuracy	±0.1°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 15 characters)	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / HLC	
Contrast Enhancement	SSDR (Samsung Super Dynamic Range) (Off / On)	
Digital Noise Reduction	SSNRIII (2D+3D noise filter) (Off / On)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (8 programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 60x)	
Gain Control	Off / Low / Medium / High / Manual	
White Balance	ATW / AWC / Manual / Indoor / Outdoor	
Electronic Shutter Speed	Auto / A.FLK / Manual (1/30 ~ 30,000sec)	
Digital Zoom	16x	
Flip / Mirror	Off / On	
Intelligent Video Analytics	Scene Change, Virtual Line, Enter / Exit, Appear / Disappear	
Alarm I/O	Input 4ea / Output 2ea (Relay)	
Remote Control Interface	RS-485/422	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, Honeywell, AD, Bosch, Vicon, GE	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	1280 x 1024, 1280 x 720P (HD), 1024 x 768, 800 x 600, 640 x 480, 320 x 240	
Max. Framerate	30fps at all resolutions	
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Multiple streaming (Up to 10 profiles)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF	
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek	
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH	-50°C ~ +50°C (-58°F ~ +122°F) / Less than 90% RH
Ingress Protection	N/A	IP66 Grade (Waterproof)
ELECTRICAL		
Input Voltage / Current	24V AC, PoE+ (IEEE802.3at)	
Power Consumption	Max. 21W	Max. 25W (Heater off), Max. 52W (Heater on) * Heater works at AC input only.
MECHANICAL		
Color / Material	Ivory / Plastic	Ivory / Aluminum / Plastic sun-shield
Dimensions (WxH)	Ø155.0 x 243.4mm (Ø6.1" x 9.58")	Ø248.0 x 316.5mm (9.76" x 12.46")
Weight	2.1Kg (4.63 lb)	4.6Kg (10.14 lb)

SNP-3430H

4CIF 43x Network PTZ Dome Camera

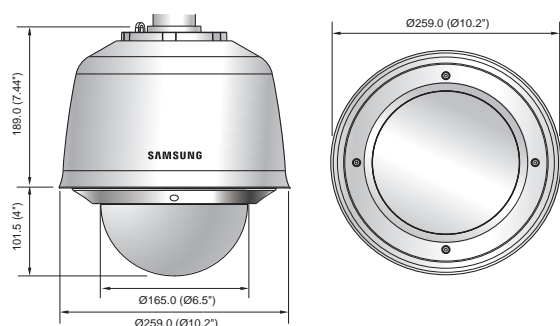


Key Features

- Max. 30(25)fps at 4CIF resolution
- 3.2 ~ 138.5mm (43x) optical zoom, 16x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- PoE plus, SD memory, IP66, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBP-300WM1 SBP-300CM SBP-300LM SBP-300PM SBP-300KM

Technical Specifications

	SNP-3430HN	SNP-3430HP
VIDEO		
Imaging Device	1/4" Ex-view HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (VPS on) (If WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.7Lux (F1.6, 50IRE), 0.001Lux (Sens-up, 512x) B/W : 0.07Lux (F1.6, 50IRE), 0.0001Lux (Sens-up, 512x)	
S / N Ratio	52dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	3.2 ~ 138.5mm (43x)	
Max. Aperture Ratio	F1.6(Wide) / F3.7(Tele)	
Angular Field of View	H : 61.2°(Wide) ~ 1.47°(Tele) / V : 47.2°(Wide) ~ 1.1°(Tele)	
Min. Object Distance	1m (3.28ft)	
Focus Control	AF / One-shot AF / Manual	
Zoom Movement Speed	Max. 3.2sec (Wide Tele)	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	360° Endless	
Pan Speed	Preset : 360°/sec, Manual : 0.05°/sec ~ 200°/sec	
Tilt Range	180°(0° ~ 180°)	
Tilt Speed	Preset : 360°/sec, Manual : 0.05°/sec ~ 200°/sec	
Preset	255ea	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 32 characters)	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) (Off / Low / Medium / High)	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Medium / High / User)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	Off / Low / Medium / High / Manual	
White Balance	ATW (In) / ATW (Out) / AWC / Manual	
Electronic Shutter Speed	Off / A.FLK / Manual (1/120 ~ 1/10Ksec)	Off / A.FLK / Manual (1/100 ~ 1/10Ksec)
Digital Zoom	16x	
Flip / Mirror	Off / On	
VPS	Off / On	
Intelligent Video Analytics	Moved / Fixed	
PIP	Off / On	
Schedule	Day / Time schedule	
Alarm I/O	Input 8ea / Output 4ea (Relay)	
Remote Control Interface	RS-485	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, GE (KALATEL), AD, Vicon, Honeywell (DK6), Bosch (Philips), Honeywell (VCLTP)	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240	704 x 576, 640 x 480, 352 x 288
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Multiple streaming (Up to 10 profiles)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF HTTPS(SSL) login authentication, Digest login authentication	
Security	IP address filtering, User access log, 802.1x Authentication	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Japanese, Russian, Swedish, Danish, Portuguese	
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-50°C ~ +50°C (-58°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66 Grade (Waterproof)	
ELECTRICAL		
Input Voltage / Current	24V AC, PoE+ (IEEE802.3at) / 2.5A	
Power Consumption	Max. 20W (Heater Off), Max. 50W (Heater On), PoE+ 24W * Heater works at AC input only	
MECHANICAL		
Color / Material	Ivory / Aluminum / Plastic sun-shield	
Dimensions (WxH)	Ø259.0 x 290.5 mm (Ø10.2" x 11.44")	
Weight	4.5Kg (9.92 lb)	

SNP-3370TH/3301H

4CIF 37x/30x Network PTZ Dome Camera

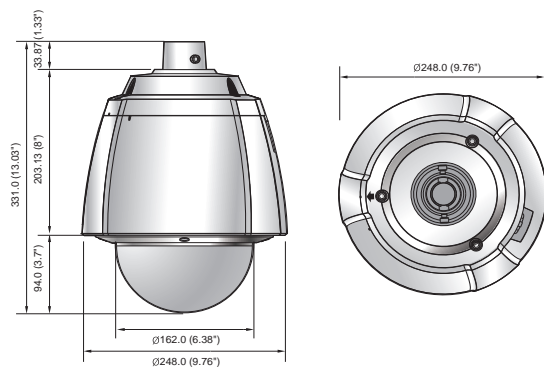


Key Features

- Max. 30(25)fps at 4CIF resolution
- 3.5 ~ 129.5mm (37x) / 3.5 ~ 105mm (30x) optical zoom, 12x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- Auto tracking (SNP-3370TH), SD memory, IP66, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



STB-300PW STB-300PP STB-355PPM STB-330PPM STB-340PPM STB-40PF STB-270B

Technical Specifications

	SNP-3370THN/3301HN	SNP-3370THP/3301HP
VIDEO		
Imaging Device	1/4" Vertical double density interline transfer CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Synchronization	Internal / Line lock	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 550TV lines	
Min. Illumination	Color : 0.7Lux (F1.6, 50IRE), 0.0027Lux (Sens-up 256x) B/W : 0.03Lux (F1.6, 50IRE), 0.0001Lux (Sens-up 256x)	
S / N Ratio	50dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	SNP-3370TH : 3.5 ~ 129.5mm (37x), SNP-3301H : 3.5 ~ 105mm (30x)	
Max. Aperture Ratio	SNP-3370TH : F1.6(Wide) / F3.9(Tele), SNP-3301H : F1.6(Wide) / F3.6(Tele)	
Angular Field of View	SNP-3370TH : H : 55.5°(Wide) ~ 1.59°(Tele) / V : 42.5°(Wide) ~ 1.19°(Tele) SNP-3301H : H : 55.5°(Wide) ~ 1.77°(Tele) / V : 42.5°(Wide) ~ 1.33°(Tele)	
Min. Object Distance	1.8m (5.91ft)	
Focus Control	AF / One-shot AF / Manual	
Zoom Movement Speed	SNP-3370TH : 2.5x/sec, SNP-3301H : 2.2x/sec	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	360° Endless	
Pan Speed	Preset : 500°/sec, Manual : 0.024°/sec ~120°/sec	
Tilt Range	190° (-5° ~ 185°)	
Tilt Speed	Preset : 500°/sec, Manual : 0.024°/sec ~120°/sec	
Preset	255ea	
Preset Accuracy	±0.1°	
Auto Tracking	Yes (SNP-3370TH only)	
OPERATIONAL		
On Screen Display	English	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / WDR / HLC	
Wide Dynamic Range	128x, 52dB	
Digital Noise Reduction	3D noise filter (Off / Low / Medium / High)	
Digital Image Stabilization	Off / On	
Motion Detection	Yes	
Privacy Masking	Off / On (8 programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 256x)	
Gain Control	Off / Low / Medium / High	
White Balance	ATW / AWC / Manual / Indoor / Outdoor	
Electronic Shutter Speed	Auto (1/60 ~ 1/20,000sec) / Manual / A.FLK	Auto (1/50 ~ 1/20,000sec) / Manual / A.FLK
Digital Zoom	12x	
Flip / Mirror	Digital flip	
Intelligent Video Analytics	Appear / Disappear	
Alarm I/O	Input 4ea / Output 2ea	
Remote Control Interface	RS-485/422	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, Honeywell, AD, Vicon	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 352 x 240, 176 x 120	704 x 576, 352 x 288, 176 x 144
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : 5 Level (Verylow, Low, Medium, High, Very high) MJPEG : 5 Level (Verylow, Low, Medium, High, Very high)	
Bitrate Control Method	CBR only	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
Audio I/O	Line in / Line out	
Audio Compression Format	ADPCM	
Audio Communication	Bi-directional audio	
IP	IPv4	
Protocol	TCP/IP, UDP/IP, RTP, RTSP, NTP, HTTP, DHCP, FTP, SMTP, ICMP, IGMP, ARP, DNS, DDNS	
Security	Password protection, IP address filtering, User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users	
Memory Slot	SD/SDHC memory slot	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-50°C ~ +50°C (-58°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66 Grade (Waterproof)	
ELECTRICAL		
Input Voltage / Current	24V AC	
Power Consumption	Max. 22W (Heater off), Max. 64W (Heater on)	
MECHANICAL		
Color / Material	Silver / Aluminum	
Dimensions (WxH)	Ø248.0 x 331.0mm (Ø9.76" x 13.03")	
Weight	4.6Kg (10.14 lb)	

SNP-3370/3301

4CIF 37x/30x Network PTZ Dome Camera

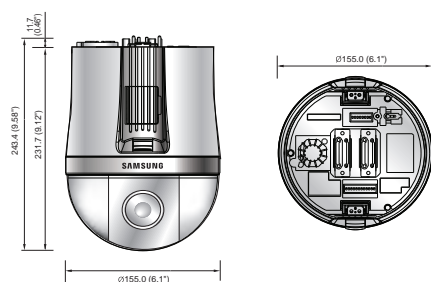


Key Features

- Max. 30(25)fps at 4CIF resolution
- 3.5 ~ 129.5mm (37x) / 3.5 ~ 105mm (30x) optical zoom, 12x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)

Housing



STH-380NPO/370NPO /370NPI/360NPO

Mount



STB-370NPC STB-25PF STB-30PF

Mount



STB-270PWV STB-350PPM STB-496PPV STB-330PPM STB-340PPM STB-270B

Technical Specifications

	SNP-3370N/3301N	SNP-3370P/3301P
VIDEO		
Imaging Device	1/4" Vertical double density interline transfer CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Interlaced	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 550TV lines	
Min. Illumination	Color : 0.7Lux (F1.6, 50IRE), 0.0027Lux (Sens-up 256x) B/W : 0.03Lux (F1.6, 50IRE), 0.0001Lux (Sens-up 256x)	
S / N Ratio	50dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	SNP-3370 : 3.5 ~ 129.5mm (37x), SNP-3301 : 3.5 ~ 105mm (30x)	
Max. Aperture Ratio	SNP-3370 : F1.6(Wide) / F3.9(Tele), SNP-3301 : F1.6(Wide) / F3.6(Tele)	
Angular Field of View	SNP-3370 : H : 55.5°(Wide) ~ 1.59°(Tele) / V : 42.5°(Wide) ~ 1.19°(Tele) SNP-3301 : H : 55.5°(Wide) ~ 1.77°(Tele) / V : 42.5°(Wide) ~ 1.33°(Tele)	
Min. Object Distance	1.8m (5.91ft)	
Focus Control	AF / One-shot AF / Manual	
Zoom Movement Speed	SNP-3370 : 2.5x/sec, SNP-3301 : 2.2x/sec	
Lens Type	DC auto iris	
Mount Type	Board-in type	
PAN / TILT / ROTATE		
Pan Range	360° Endless	
Pan Speed	Preset : 500°/sec, Manual : 0.024°/sec ~ 120°/sec	
Tilt Range	190° (-5° ~ 185°)	
Tilt Speed	Preset : 500°/sec, Manual : 0.024°/sec ~ 120°/sec	
Preset	255ea	
Preset Accuracy	±0.1°	
OPERATIONAL		
On Screen Display	English	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / WDR / HLC	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Digital Noise Reduction	3D noise filter (Off / Low / Medium / High)	
Digital Image Stabilization	Off / On	
Motion Detection	Yes	
Privacy Masking	Off / On (8 programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 256x)	
Gain Control	Off / Low / Medium / High	
White Balance	ATW / AWC / Manual / Indoor / Outdoor	
Electronic Shutter Speed	Auto (1/60 ~ 1/20,000sec) / Manual / A.FLK	Auto (1/50 ~ 1/20,000sec) / Manual / A.FLK
Digital Zoom	12x	
Flip / Mirror	Digital flip	
Intelligent Video Analytics	Appear / Disappear	
Alarm I/O	Input 4ea / Output 2ea	
Remote Control Interface	RS-485/422	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, Honeywell, AD, Vicon	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 352 x 240, 176 x 120	704 x 576, 352 x 288, 176 x 144
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : 5 Level (Verylow, Low, Medium, High, Very high) MJPEG : 5 Level (Verylow, Low, Medium, High, Very high)	
Bitrate Control Method	CBR only	
Streaming Capability	Dual streaming (MPEG-4 + MJPEG or H.264 + MJPEG)	
Audio I/O	Line in / Line out	
Audio Compression Format	ADPCM	
Audio Communication	Bi-directional audio	
IP	IPv4	
Protocol	TCP/IP, UDP/IP, RTP, RTSP, NTP, HTTP, DHCP, FTP, SMTP, ICMP, IGMP, ARP, DNS, DDNS	
Security	Password protection, IP address filtering, User access log	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users	
Memory Slot	SD/SDHC memory slot	
Web Viewer	Supported OS : Windows XP / VISTA / 7 Supported Browser : Internet Explorer 6.0 or Higher	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH	
ELECTRICAL		
Input Voltage / Current	24V AC	
Power Consumption	Max. 16W	
MECHANICAL		
Color / Material	Silver / Plastic	
Dimensions (WxH)	Ø155.0 x 243.4mm (Ø6.1" x 9.58")	
Weight	1.7Kg (3.75 lb)	

SNP-3120/3120V/3120VH

4CIF 12x Network PTZ Dome Camera

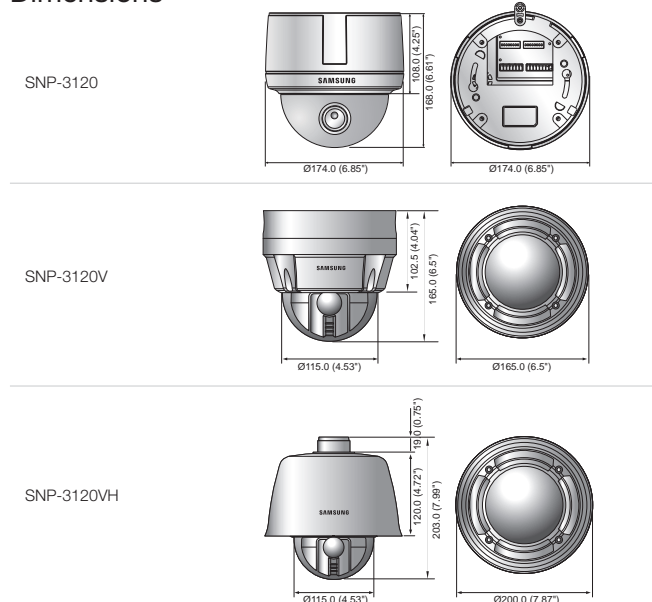


Key Features

- Max. 30(25)fps at 4CIF resolution
- 3.69 ~ 44.32mm (12x) optical zoom, 16x digital zoom
- H.264, MPEG-4, MJPEG multiple codec
- PoE plus, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBP-300WM1 SBP-300CM SBP-300HM1 SBP-300LM SBP-300PM SBP-300KM

Technical Specifications

	SNP-3120N/VN/VHN	SNP-3120P/VP/VHP
VIDEO		
Imaging Device	1/4" Ex-view HAD PS CCD	
Total Pixels	811(H) x 508(V)	795(H) x 596(V)
Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
Scanning System	Progressive (VPS on) (if WDR on, Interlaced scan)	
Frequency	H : 15.734KHz / V : 59.94Hz	H : 15.625KHz / V : 50Hz
Horizontal Resolution	Color : 600TV lines	
Min. Illumination	Color : 0.7Lux (F1.65, 50IRE), 0.001Lux (Sens-up 512x), B/W : 0.07Lux (F1.65, 50IRE), 0.0001Lux (Sens-up 512x)	
S / N Ratio	50dB	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	3.69 ~ 44.32mm (12x)	
Max. Aperture Ratio	F1.65(Wide) / F2.01(Tele)	
Angular Field of View	H : 54.44°(Wide) ~ 4.62°(Tele), V : 41.42°(Wide) ~ 3.52°(Tele)	
Min. Object Distance	0.2m(Wide) / 0.8m(Tele)	
Focus Control	AF / One-shot AF / Manual	
Lens Type	DC auto iris	
PAN / TILT / ROTATE		
Pan Range	360° Endless	
Pan Speed	Preset : 650°/sec, Manual : 0.05°/sec ~ 120°/sec (Turbo : 200°/sec)	
Tilt Range	-5° ~ 185°	
Tilt Speed	Preset : 650°/sec, Manual : 0.05°/sec ~ 120°/sec	
Preset	255ea	
Preset Accuracy	±0.1°	
OPERATIONAL		
Camera Title	Off / On (Displayed up to 12 characters)	
Day & Night	Auto (ICR) / Color / B/W	
Backlight Compensation	Off / BLC / WDR	
Wide Dynamic Range	128x, 52dB	160x, 52dB
Contrast Enhancement	XDR (eXtended Dynamic Range) (Off / Low / Medium / High)	
Digital Noise Reduction	Motion adaptive 2D+3D noise filter (Off / Low / Medium / High)	
Digital Image Stabilization	Off / On	
Motion Detection	Off / On (4 programmable zones)	
Privacy Masking	Off / On (12 polygonal programmable zones)	
Sens-up (Frame Integration)	Off / Auto (2x ~ 512x)	
Gain Control	Off / Low / Medium / High / Manual	
White Balance	ATW (In) / ATW (Out) / AWC / Manual	
Electronic Shutter Speed	Off / A.FLK / Manual (1/120 ~ 1/10Ksec)	
Digital Zoom	16x	
Flip / Mirror	Digital flip	
VPS	Off / On	
Intelligent Video Analytics	Moved / Fixed	
Alarm I/O	Input 2ea / Output 2ea (Relay)	
Remote Control Interface	RS-485	
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, Honeywell, AD, Vicon, GE, Bosch	
NETWORK		
Ethernet	RJ-45 (10/100BASE-T)	
Video Compression Format	H.264, MPEG-4, MJPEG	
Resolution	704 x 480, 640 x 480, 352 x 240, 320 x 240	704 x 576, 640 x 480, 352 x 288, 320 x 240
Max. Framerate	30fps	25fps
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control	
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR	
Streaming Capability	Multiple streaming (Up to 10 profiles)	
Audio I/O	Mic / Line in, Line out	
Audio Compression Format	G.711 u-law	
Audio Communication	Bi-directional audio	
IP	IPv4, IPv6	
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE	
Security	FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, ONVIF HTTPS(SSL) Login authentication, Digest login authentication	
Streaming Method	Unicast / Multicast	
Max. User Access	10 users at unicast mode	
Memory Slot	SD/SDHC memory slot	
ONVIF Conformance	Yes	
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari	
Central Management Software	NET-i viewer	
ENVIRONMENTAL		
Operating Temperature / Humidity	SNP-3120 : -10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH SNP-3120V/3120VH : -50°C ~ +50°C (-58°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66 (SNP-3120V/3120VH) * SNP-3120 not available	
ELECTRICAL		
Input Voltage / Current	24V AC, PoE+ (IEEE802.3at)	
Power Consumption	SNP-3120 : Max. 15W, SNP-3120V/3120VH : Max. 15W (Heater off), Max. 45W (Heater on) * Heater works at AC power input only	
MECHANICAL		
Color / Material	SNP-3120 : Ivory / Plastic, SNP-3120V : Ivory / Aluminum (Vandal-resistance) SNP-3120VH : Ivory / Aluminum (Vandal-resistance), Sun-shield built-in	
Dimensions (WxH)	SNP-3120 : Ø174.0 x 168.0mm (Ø6.85" x 6.61"), SNP-3120V : Ø165.0 x 165.0mm (Ø6.5" x 6.5") SNP-3120VH : Ø200.0 x 203.0mm (Ø7.87" x 7.99")	
Weight	SNP-3120 : 1.2Kg (2.65 lb), SNP-3120V : 1.9Kg (4.19 lb), SNP-3120VH : 2.4Kg (5.29 lb)	

SCU-9051

Weatherproof Thermal Positioning System

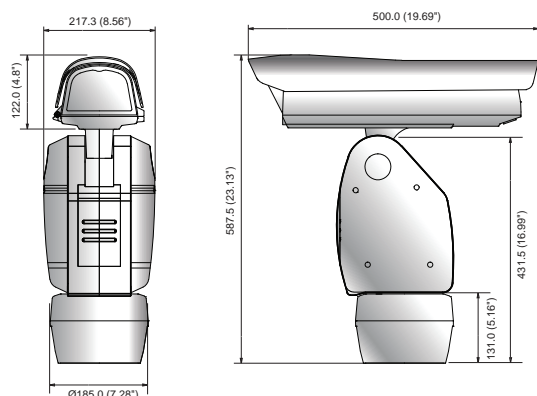


Key Features

- Outstanding 1km detection without lighting
- Min. discernable temperature of 0.08°C
- Built-in 50mm, 0.47mrad. color pattern
- IP66, Coax : Pelco-C (Coaxitron), RS-485, 24V AC

Dimensions

Unit : mm (inch)



Accessories (Optional)



SBU-500WM



SBU-220PM

Technical Specifications

	SCU-9051N	SCU-9051P
VIDEO		
Imaging Device	320(H) x 240(H) uncooled VOX microbolometer	
Sensor Pitch	23.5µm	
Measured Wavelength Range	8 ~ 14µm, LWIR	
Video Ratio (Sensor)	30fps	25fps
Thermal Sensitivity (NETD)	85mK@F1.4	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	50mm (Fixed)	
Max. Aperture Ratio	1 : 1.4	
Angular Field of View (HxV)	8.6° x 6.5°	
Min. Object Distance	27m ~ ∞, Pan focus	
IFOV (Instantaneous Field of View)	0.47mrad	
PAN / TILT		
Pan Range	360° Endless	
Pan Speed	Preset : 0.1° ~ 120°/sec, Manual : 0.1°/sec ~ 36°/sec (Turbo : 120°/sec)	
Tilt Range	-85° ~ 40°	
Tilt Speed	Preset : 0.1° ~ 36°/sec, Manual : 0.1°/sec ~ 36°/sec	
Preset	255	
Preset Accuracy	±0.1°	
OPERATIONAL		
On Screen Display	English, Chinese, French, German, Spanish, Italian, Portuguese	
Image Mode	Color 1 / Color 2 / ISO / B/W	
Sharpness	Off / On (Manual)	
Contrast Enhancement	Auto / Manual	
Digital Noise Reduction	3D-DNR (4 Step : Low / Medium / High / Off)	
Digital Zoom	Off / On (1x ~ 4x)	
Temp Display	8 Zone / Point	
IV (Intelligence Video)	Fence / Tracking / MD	
ISO / Fire Man	Isolated temp display / Fire man	
Alarm	3 In 2 Out 1 Aux	
Communication	Coaxial control (SPC-300 compatible), RS-485	
Protocol	Coax : Pelco-C (Coaxitron) RS-485 : Samsung-T/E, Pelco-D/P, Panasonic, Vicon, Honeywell, AD, GE, Bosch	
ENVIRONMENTAL		
Operating Temperature / Humidity	-50°C ~ +50°C (-58°F ~ +122°F) / Less than 90% RH	
Ingress Protection	IP66	
ELECTRICAL		
Input Voltage / Current	24V AC ±10%	
Power Consumption	Max. 40W / 144W (Fan & heater on)	
MECHANICAL		
Color / Material	Ivory / Aluminum	
Dimensions (WxHxD)	217.3 x 587.5 x 500.0mm (8.56" x 23.13" x 19.69")	
Weight	17.5Kq (38.58 lb)	

SCB-9051/9050

Weatherproof Thermal Camera

iPOLiS



Key Features

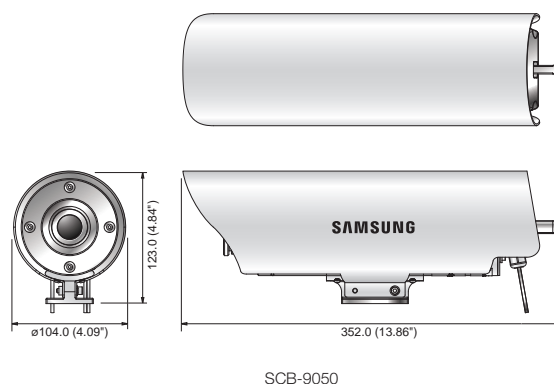
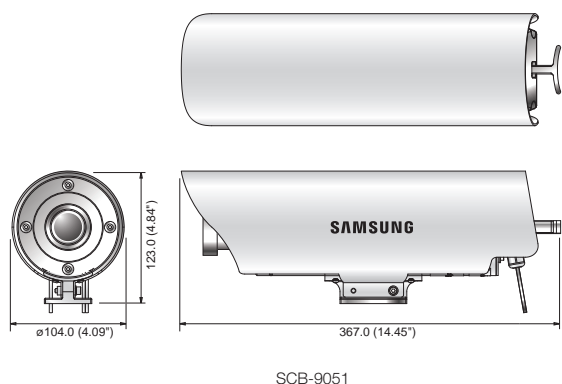
- Outstanding 1km detection without lighting : SCB-9051
360m detection without lighting : SCB-9050
- Min. discernable temperature of 0.08°C
- Built-in 50mm fixed lens, 0.47mrad. color pattern : SCB-9051
14mm fixed lens, 1.68mrad. color pattern : SCB-9050
- IP66, RS-485, 24V AC

Technical Specifications

	SCB-9051N/9050N	SCB-9051P/9050P
VIDEO		
Imaging Device	320(H) x 240(H) uncooled VOX microbolometer	
Sensor Pitch	23.5μm	
Measured Wavelength Range	8 ~ 14μm, LWIR	
Video Ratio (Sensor)	30fps	25fps
Thermal Sensitivity (NETD)	85mK@F1.4	
Video Output	CVBS : 1.0 Vp-p / 75Ω composite	
LENS		
Focal Length (Zoom Ratio)	50mm (Fixed) : SCB-9051, 14mm (Fixed) : SCB-9050	
Max. Aperture Ratio	1 : 1.4	
Angular Field of View (HxV)	8.6° x 6.5° : SCB-9051, 30.1° x 22.8° : SCB-9050	
Min. Object Distance	27m ~ ∞, Pan focus : SCB-9051, 0.5m ~ ∞, Pan focus : SCB-9050	
IFOV (Instantaneous Field of View)	0.47mrad : SCB-9051, 1.68mrad : SCB-9050	
Focus Control	Manual	
OPERATIONAL		
On Screen Display	English, Japanese, Korean	
Image Mode	Color 1 / Color 2 / ISO / B/W	
Sharpness	6 levels : Off ~ 5	
Contrast Enhancement	11 levels (Auto), 10 levels (Manual)	
Digital Noise Reduction	3D-DNR (4 Step : Low / Medium / High / Off)	
Digital Zoom	Off / On (2x ~ 4x)	
Communication	RS-485	
Protocol	Samsung-T/E, Pelco-D	
ENVIRONMENTAL		
Operating Temperature / Humidity	-30°C ~ +55°C (-22°F ~ +131°F) / Less than 90% RH	
Ingress Protection	IP66	
ELECTRICAL		
Input Voltage / Current	24V AC ±10%	
Power Consumption	Max. 10.5W / 22W (With heater)	
MECHANICAL		
Color / Material	Ivory / Aluminum	
Dimensions (WxHxD)	Ø104.0 x 123.0 x 367.0mm (Ø4.09" x 4.84" x 14.45") : SCB-9051 Ø104.0 x 123.0 x 352.0mm (Ø4.09" x 4.84" x 13.86") : SCB-9050	
Weight	Approx. 2.2Kg (4.85 lb)	

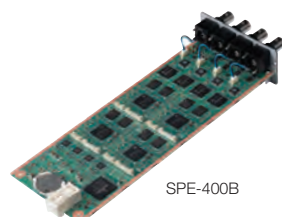
Dimensions

Unit : mm (inch)



SPE-400B/1600R

4CH Network Video Encoder (Blade Type) / Extension Rack



SPE-400B



SPE-1600R

4CH

16CH

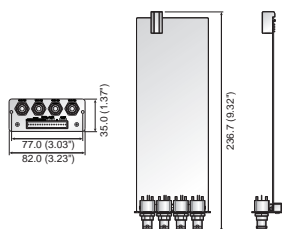
4CIF

Key Features

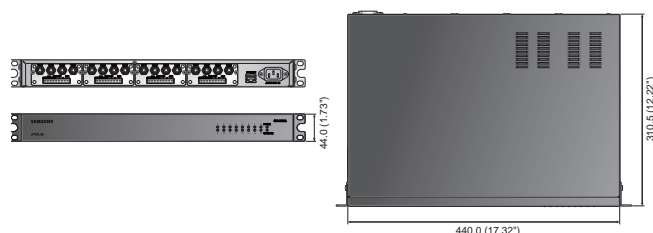
- Max. 30(25)fps at 4CIF resolution
- H.264, MPEG-4, MJPEG multiple codec
- Multiple streaming simultaneously
- 10/100/1000BASE-T
- SPE-1600R : extension rack, 4 slots for SPE-400B

Dimensions

Unit : mm (inch)



SPE-400B



SPE-1600R

Technical Specifications

	SPE-400BN		SPE-400BP	
OPERATIONAL				
Video In	4 CVBS : 1.0 Vp-p / 75Ω composite, NTSC/PAL auto detection			
De-interlacing Filter	Built-in			
Event Trigger	Motion detection, Alarm input, Video loss			
Alarm I/O	Input 4ea / Output 4ea (Relay)			
Remote Control Interface	4ea RS-485 (Half duplex)			
RS-485 Protocol	Samsung-T/E, Pelco-P/D			
NETWORK				
Ethernet	RJ-45 (10/100/1000BASE-T)			
Video Compression Format	H.264, MPEG-4, MJPEG			
Resolution	704 x 480, 640 x 480, 352 x 240, 320 x 240		704 x 576, 640 x 480, 352 x 288, 320 x 240	
Max. Framerate	30fps per channel		25fps per channel	
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control			
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR			
Streaming Capability	Multiple streaming (Up to 10 profiles)			
IP	IPv4, IPv6			
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPOE FTP, SMTP, ICMP, IGMP, SNMPV1/V2C/V3(MIB-2), ARP, DNS, DDNS, ONVIF			
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log			
Streaming Method	Unicast / Multicast			
Max. User Access	10 users at unicast mode			
ONVIF Conformance	Yes			
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari			
Central Management Software	NET-i viewer			
ENVIRONMENTAL				
Operating Temperature / Humidity	0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 80% RH			
ELECTRICAL				
Input Voltage / Current	5V DC			
Power Consumption	Max. 11W			
MECHANICAL				
Color / Material	Black / Metal			
Dimensions (WxHxD)	210.2 x 82.0 x 35.0mm (8.27" x 3.23" x 1.38")			
Weight	165.9g (0.37 lb)			

SPE-1600R

CONNECTION	
Expansion Slots	4 Slots for SPE-400B
Connector	RJ-45 (10/100/1000BASE-T)
ENVIRONMENTAL	
Operating Temperature	0°C ~ +40°C (+32°F ~ +104°F)
Operating Humidity	20% ~ 80% RH
ELECTRICAL	
Input Voltage / Current	100 ~ 240V AC ±10%, 50/60Hz / 0.5A
Power Consumption	Max. 50W (with SPE-400B x 4)
MECHANICAL	
Color / Material	Black / Metal
Dimensions (WxHxD)	478.0 x 310.5 x 44.0mm (18.82" x 12.22" x 1.73")
Weight	3Kg (6.61 lb)

SPE-400

4CH Network Video Encoder

iPOLiS



4CH

H.264

4CIF

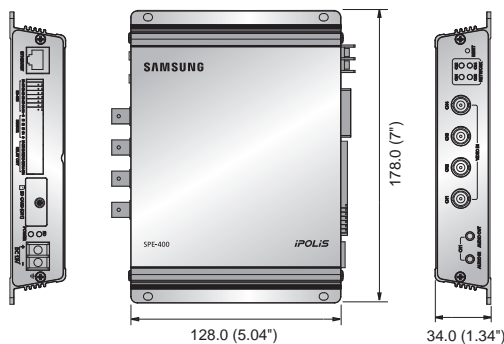
Bi-directional
Audio

Key Features

- Max. 30(25)fps at 4CIF resolution
- H.264, MPEG-4, MJPEG multiple codec
- Multiple streaming simultaneously
- 10/100/1000BASE-T
- SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

	SPE-400N		SPE-400P	
OPERATIONAL				
Video In	4 CVBS : 1.0 Vp-p / 75Ω composite, NTSC/PAL auto detection			
De-interlacing Filter	Built-in			
Event Trigger	Motion detection, Alarm input, Video loss			
Alarm I/O	Input 4ea / Output 4ea (Relay)			
Remote Control Interface	4ea RS-485 (Half duplex)			
RS-485 Protocol	Samsung-T/E, Pelco-P/D			
NETWORK				
Ethernet	RJ-45 (10/100/1000BASE-T)			
Video Compression Format	H.264, MPEG-4, MJPEG			
Resolution	704 x 480, 640 x 480, 352 x 240, 320 x 240		704 x 576, 640 x 480, 352 x 288, 320 x 240	
Max. Framerate	30fps per channel		25fps per channel	
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control			
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR			
Streaming Capability	Multiple streaming (Up to 10 profiles)			
Audio I/O	1ea line in / 1ea line out (CH1 only) (SPE-400)			
Audio Compression Format	G.711 u-law			
Audio Communication	Bi-directional audio			
IP	IPv4, IPv6			
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPV1/V2C/V3(MIB-2), ARP, DNS, DDNS, ONVIF			
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log			
Streaming Method	Unicast / Multicast			
Max. User Access	10 users at unicast mode			
Memory Slot	SD/SDHC memory slot (CH1 only)			
ONVIF Conformance	Yes			
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari			
Central Management Software	NET-i viewer			
ENVIRONMENTAL				
Operating Temperature / Humidity	0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 80% RH			
ELECTRICAL				
Input Voltage / Current	12V DC			
Power Consumption	Max. 15W			
MECHANICAL				
Color / Material	Silver / Metal			
Dimensions (WxHxD)	128.0 x 34.0 x 178.0mm (5.04" x 1.34" x 7")			
Weight	562g (1.29 lb)			

SPE-100

1CH Network Video Encoder

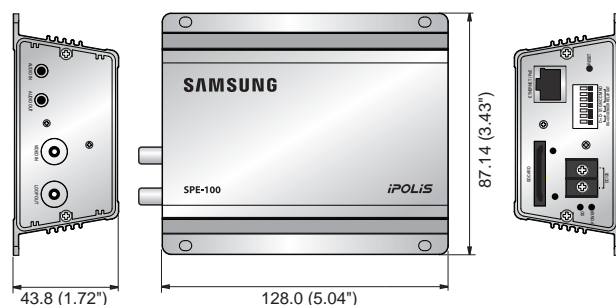


Key Features

- Max. 30(25)fps at 4CIF resolution
- H.264, MPEG-4, MJPEG multiple codec
- Multiple streaming simultaneously
- 10/100BASE-T
- PoE, SD memory, bi-directional audio support

Dimensions

Unit : mm (inch)



Technical Specifications

	SPE-100N		SPE-100P	
OPERATIONAL				
Video In	CVBS : 1.0 Vp-p / 75Ω composite, NTSC/PAL auto detection			
Video Out	CVBS : 1.0 Vp-p / 75Ω composite, Loop-out			
De-interlacing Filter	Built-in			
Event Trigger	Motion detection, Alarm input, Video loss			
Alarm I/O	Input 1ea / Output 1ea (Relay)			
Remote Control Interface	1ea RS-485 (Half duplex)			
RS-485 Protocol	Samsung-T/E, Pelco-P/D			
NETWORK				
Ethernet	RJ-45 (10/100BASE-T)			
Video Compression Format	H.264, MPEG-4, MJPEG			
Resolution	704 x 480, 640 x 480, 352 x 240, 320 x 240	704 x 576, 640 x 480, 352 x 288, 320 x 240		
Max. Framerate	30fps	25fps		
Video Quality Adjustment	H.264, MPEG-4 : Compression level, Target bitrate level control MJPEG : Quality level control			
Bitrate Control Method	H.264, MPEG-4 : CBR or VBR, MJPEG : VBR			
Streaming Capability	Multiple streaming (Up to 10 profiles)			
Audio I/O	1ea line in / 1ea line out			
Audio Compression Format	G.711 u-law			
Audio Communication	Bi-directional audio			
IP	IPv4, IPv6			
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTSP, NTP, HTTP, HTTPS, SSL, DHCP, PPPoE FTP, SMTP, ICMP, IGMP, SNMPV1/V2C/V3(MIB-2), ARP, DNS, DDNS, ONVIF			
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log			
Streaming Method	Unicast / Multicast			
Max. User Access	10 users at unicast mode			
Memory Slot	SD/SDHC memory slot			
ONVIF Conformance	Yes			
Web Viewer	Supported OS : Windows XP / VISTA / 7, MAC OS Supported Browser : Internet Explorer 6.0 or Higher, Firefox, Google Chrome, Apple Safari			
Central Management Software	NET-i viewer			
ENVIRONMENTAL				
Operating Temperature / Humidity	-10°C ~ +50°C (+14°F ~ +122°F) / 20% ~ 80% RH			
ELECTRICAL				
Input Voltage / Current	12V DC, PoE (IEEE802.3af)			
Power Consumption	Max. 4W			
MECHANICAL				
Color / Material	Silver / Metal			
Dimensions (WxHxD)	128.0 x 43.8 x 87.14mm (5.04" x 1.72" x 3.43")			
Weight	391g (0.86 lb)			

SMS-4600M/4610M/4620

Video Wall Screen

iPOLiS



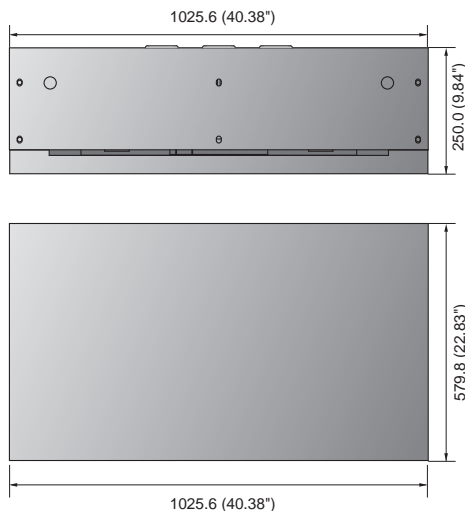
700cd/m ² Brightness	46" Diagonal Size	3000:1 High Contrast Ratio	1366x768 Resolution	8ms Response Time
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Key Features

- LCD block module optimized for video wall
- Ultra-slim bezel (gap: 6.7mm)
- Integrated matrix switcher (SMS-4600M/4610M)
- GUI based software provided (Ethernet)
- Front panel sliding open and tilting
- Easy installation/maintenance

Dimensions

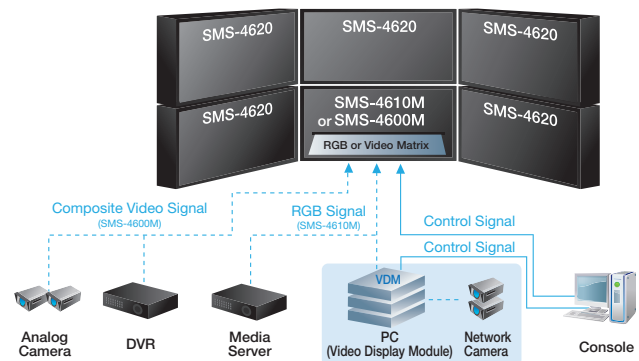
Unit : mm (inch)



Technical Specifications

		SMS-4600M	SMS-4610M	SMS-4620
LCD PANEL CAPABILITIES				
LCD Technology		S-PVA, Normally black, DID technology for extensive usage, AIR anti image retention circuitry		
Diagonal Size / Resolution		46" / 1,366 x 768 (WXGA)		
Luminance		700cd/m²		
Viewing Angle (H/V)		H 178° x V 178°		
Contrast Ratio		3,000 : 1		
Color		10 bit color resolution – 1.07 B colors		
Response Time		8ms		
Back Light	Operating Life Time	50,000hours		
	White Point	10,000K		
Dimensions (WxHxD)		1025.6(40.38") x 579.8(22.83") x 250.0(9.84") mm		
Bezel Width		Right, Bottom < 2.4mm, Left, Top < 4.3mm		
Weight	Panel	16Kg	16Kg	16Kg
	Frame	39.6Kg	40.6Kg	39.2Kg
INPUT / OUTPUT SIGNAL				
Pixel Clock		25.2 ~ 165MHz		
Horizontal / Vertical Range		30 ~ 68KHz / 50~60Hz		
Composite Video Signal	Connector	BNC	N/A	BNC
	Number of Matrix Input/Output	Typ.16 / 16 Max. 128 / 64	N/A	1 / 1
	Color System	NTSC / PAL	N/A	NTSC / PAL
RGB Signal	Connector	N/A	15pins D-sub	15pins D-sub
	Number of Matrix Input/Output	N/A	Typ.16 / 16 Max. 48 / 48	1 / 1
	Sync	N/A	Separate	Separate
	Resolution	640x480, 800x600, 1024x768, 1152x864, 1280x768, 1280x960, 1280x1024 (horizontal 63.981kHz / vertical 60.020Hz pixel clock 108MHz)		
POWER				
Input Voltage		AC100 ~ 240V AC, 50 ~ 60Hz		
Power Consumption		300W		
WALL CONTROL				
Control Signal		Ethernet		
ENVIRONMENTAL				
Operating Temperature / Humidity		0 ~ +40°C / 20% ~ 80%		
Storage Temperature / Humidity		-20 ~ +60°C / 10% ~ 90%		
WALL CONTROL				
Control Signal		CE-EMC, CB, UL, FCC & ROHS		

System Configuration



* Each model can be installed separately or along with other products, depending on the video signal

DEVICES

Input/Output

Transmission / Control / Analytics

Peripheral

Recommended Devices



SPN-4240
SPN-3240
SPN-2080
SPO-400
SPO-800
SPO-1600
SPA-100
SRN-6450/3250
SRN-1670D/470D
SPC-2000

SPN-4240

Gigabit L3 Ethernet Switch

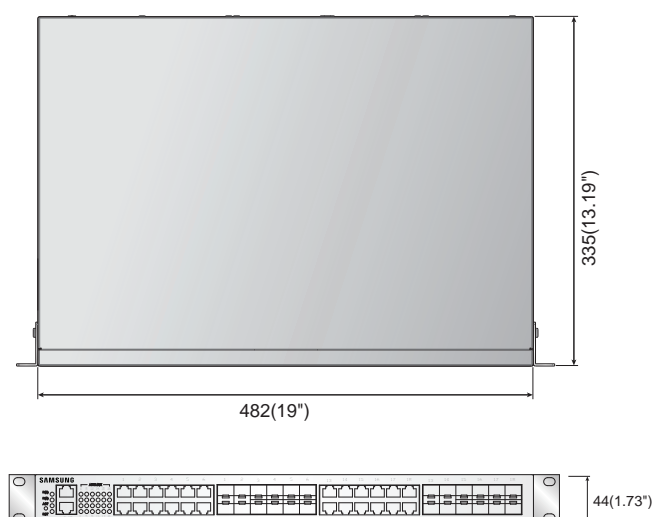


Key Features

- System Architecture
 - 24 Combo Port
 - 24 port 1000Base-X (SFP Type)
 - 24 port 10/100/1000Base-Tx (RJ-45 Type)
- Ultra-high speed massive service for communication service providers
- Wire-speed switching / routing based on stably operating hardware
- Layer-3 switching network configured by installing the routing protocols
- Broad bandwidth management
- VLAN(Virtual Local Area Network, IEEE 802.1Q) supported
- STP(Spanning Tree Protocol, IEEE 802.1D) supported
- Policy-based quality of service (QoS) supported
- Reliable network security implemented through packet filtering and ACL
- Various additional options available
- Quick and convenient system environment and operation
- Operator-oriented convenient operating management

Dimensions

Unit : mm (inch)



Functions

SPN-4240 is an improved distribution switch supporting hardware-based IPv6, routing, multicasting and QoS for IP TVs and TPS service, which is applied to a ultra high-speed multimedia service in layer 2/3/4 based on Metro-IP network and Ethernet.

Designed to receive user traffic from the traffic distribution switch before transferring to the high-speed backbone switch and router, or to process the opposite traffic, it is a gigabit metro Ethernet switch for backbone access that supports up to 48 Gbps switching capacity and up to 36Mpps packet processing. Featured by high-speed non-blocking switch fabric, it minimizes the delay time inside of the switch by processing incoming packets to each port simultaneously while maximizing the data integrity by adopting the Store-and-Forward switching system.

All ports can receive and transfer frames simultaneously so as to support duplex communication system with twice-wide bandwidth. The switch can be connected directly to the user terminal and be applied to small-and-medium sized networks using high-speed and other layer 2/3/4 Ethernet switching capacities.

The hardware-based layer 3 capacity provides communications service using RIPv1/v2, OSPF, BGPv4 and IP static routing in a simple network environment such as the conventional LAN environment. Furthermore, the multicasting routing protocols such as hardware-based IGMP (Internet Group Management Protocol) snooping support the next generation multimedia applications, duplicated power supply, bandwidth management and QoS (Quality-of-Service) so that the companies and service providers can provide differentiated IP services according to the application service or SLA (Service Level Agreement).



Technical Specifications

	SPN-4240
Hardware Specification	
System Architecture	• Gigabit Ethernet Switch 24 Combo Port - 24 port 1000Base-X (SFP Type) - 24 port 10/100/1000Base-Tx (RJ-45 Type)
Memory	256MB Main Memory / 32MB Flash Memory
Physical Dimension	19" Rack-mount size 44mm(H) x 482.6mm(W) x 335mm(D)
Environment Conditions	
Input Voltage and Frequency	AC (Hot-Swapping) 100-240V AC, 50/60 Hz
Power Consumption	74W MAXIMUM
Operating Temperature	0 ~ 50°C
Storage Temperature	-20 ~ 60°C
Performance	
Switching Fabric	48 Gbps non-blocking
Throughput	36Mpps wire-speed L2/L3 Switching/Routing
Capacity	
MAC Address	32K MAC Management
QoS	QoS Policing 1K & Traffic Policing Max 1K
VLAN	4 K VLAN
	Overlap VLAN, 8021.Q Tag Vlan (Max 4K Tag Vlan)
	Link Aggregation (802.3ad) : 12 group, Max 8port/group
	802.1v protocol base VLAN, VMAN(Ether9100, Q-in-Q)
Services and Features	
Routing Protocol	RIP v1/v2, OSPF v2, BGP v4, Static, VRRPDefault gateway, Multiple Default gateway Loop-back interface , PIM-SM, DVMRP
Filtering, Security & QoS	IEEE 802.1x support, IEEE 802.1p QoS, ToS, Diff-serv support Congestion Management, Filtering: Mac address, Mac address Count limits, Netbios, NBT, DHCP,Broadcast Storm, Certain IP control, IP Packet filtering,IP Conflict Detection, IP Sub-network band blocking Virus Filtering: DoS prevention, Warm virus Filtering Subscriber Traffic control by ACLs (Access Control Lists)
Bandwidth Management	Hardware-based Rate Limiting Rate Limiting : 1Mbps per Gigabit port Egress Traffic Shaping per Port Ingress Traffic Policy per Flow/Package Hardware Based Symmetric & Asymmetric Rate Limiting
Management	SNMP v1/v2, RMON, MIB-I/II, sFlow, tcpDump, Remote S/W Upgrade, Telnet, TFTP, FTP Port Mirroring, CLI, Syslog, Administrator control,RADIUS, TACACS+, SSH
Management	STP(802.1D), RSTP(802.1w), PVSTPDHCP server (more than 2000 IP address) & relay (more than 2) NTP (Network Time protocol) server & Client, NATJumbo Frame packet support: 10290byte (Giga)
Multicasting Protocol	IGMP v1, v2, IGMP snooping, IGMP snooping fast leave, IGMP snooping suppression, more than 1,000 Multicast groups PIM-SM, PIM-SSM

		SPN-4240			
Standards					
ITFEEE Standards		802.1D Spanning Tree Protocol	802.1p Priority Control		
		802.1w RSTP	802.3 10Base-T Ethernet		
		802.3u 100Base-X Fast Ethernet	802.3ad Link Aggregation		
		802.3x Flow Control	802.3z 1000Base-X		
IETF Standards		RFC 1058 RIP v1	RFC 1771 BGMP4		
		RFC 1112 IGMP	RFC 768 UDP		
		RFC 1723 RIP v2	RFC 791 IP		
		RFC 903 TCP	RFC 2236 IGMP		
		RFC 2131 DHCP Server/Relay	RFC 2362 PIM-SM		
		RFC 2328 OSF v2	RFC 1075 DVMRP, RFC 3973 PIM-DM		
Management Standards & MIB		RFC 783 TFTP	RFC 1213 MIB-II		
		RFC 854 Telnet	RFC 1253 OSPF-MIB		
		RFC 1157 SNMP v1	RFC 1493 Bridge -MIB		
		RFC 1724 RIP v2-MIB	RFC 1902 SNMP v2		
		RFC 1757 RMON-MIB	RFC 1902 SNMP-MIB		
		RFC 1850 OSPF2-MIB			
Ordering Information					
		Item	Specifications	Remark	
Chassis		SPN-4240	24Combo Ports 1000Base-X (SFP) or 1000Base-TX (RJ-45), DualAC		
GBIC (SFP)	1GbE	GBIC-SFP-SX	Mlni GBIC 1000Base SX, Multimode, 550m, LC Type, 2Core		3 kinds of transceivers areavailable for the 1000Base-X SFP port that is used for uplink and downlink
		GBIC-SFP-LX10	Mlni GBIC 1000Base LX, Singlemode, 10km, LC Type, 2Core		
		GBIC-SFP-LH40	Mlni GBIC 1000Base LH, Singlemode, 40km, LC Type, 2Core		

SPN-3240

L3 Ethernet Switch

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Key Features

- System Architecture
 - 2 fixed slots : 2 Combo port
 - 2 port 1000Base-X (SFP) or
 - 2 port 10/100/1000Base-Tx (RJ-45)
 - 3 slots : 10/100Base-TX module (8 ports)
 - 100Base-FX module (8 ports)
- Routing / multicasting supported
- Bandwidth management / QoS supported
 - Hardware-based bandwidth management for each port
 - Traffic control according to the priority of packets (QoS)
 - Packet filtering supported (MAC / NetBios / DHCP filtering)
- Quick and Easy operation management
 - TFTP, Telnet, SNMP I/II agent, Sys log, RMON supported
 - EMS (Elementary Management System), Port mirroring supported
- Economic feasibility with an extension by a unit of 8 ports & blocking suspended users in case of a failure
- Hot swapping supported so that the admin can change the network settings without stopping the service Power and fan duplication (hot swapping supported)

Functions

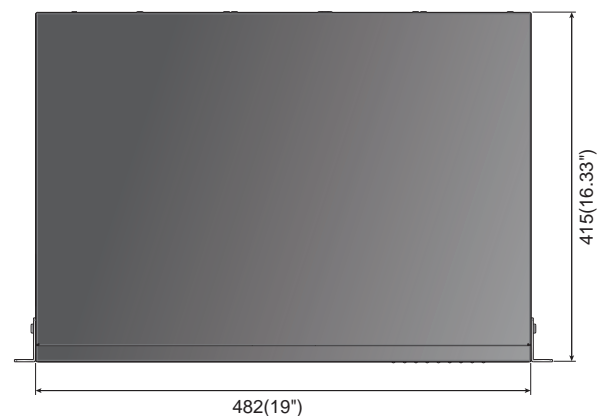
As chassis-type of distribution switch for L2/L3 users that supports ultra high-speed data communications service on a metro Ethernet network, it receives user traffic on 100Mbps and transfers it to the high-speed backbone switch or router, or processes the opposite traffic.

With U1, the minimum size of its kind for space efficiency and easy installation, it supports hardware-based distribution switching and model-specific hot swapping to maximize the system stability and enable system extension without stopping the service, a guarantee of maximized service availability.

It enables the customer to implement a customized optimal network solution in a quick and easy way, and allows the provider to provide differentiated IP-based services.

Dimensions

Unit : mm (inch)



Technical Specifications

SPN-3240	
Hardware Specification	
System Architecture	- 2 fixed slots : 2 Combo port
	2 port 1000Base-X (SFP) or 2 port 10/100/1000Base -Tx (RJ-45)
	- 3 slots : 10/100Base-TX module (8 ports)
	100Base-FX module (8 ports)
Main Processor	Power PC Processor
Memory	256MB Main Memory / 32MB Flash Memory / 2MB for Boot
Physical Dimensions	19" Rack Mount Type 44mm(H) x 482.6mm(W) x 415mm(D)
Environment Conditions	
Input Voltage and Frequency	AC (Hot-Swapping) 100-240V AC, 50/60 Hz
Power Consumption	68W MAXIMUM
Suppression	40DB ~ 50DB
Heating Value	19CAL/SEC
Operating Temperature	0 ~ 50°C
Storage Temperature	-20 ~ 60°C
Operating Humidity	80% RELATIVE HUMIDITY
Performance	
Switching Fabric	17Gbps non-blocking(Store and Forward)
Throughput	6.5Mpps wire-speed L2/L3 Switching/Routing
Capacity	
MAC Address	Up to 16K MAC Addresses Management
QoS	4 K VLAN
Services and Features	
Routing Protocol	Static, Default gateway, Loop-back interface
IP Multicasting Protocol	IGMP v2.0, IGMP snooping, PIM-SM
Bandwidth Management	Rate Limiting and guarantee with megabit resolution
	Hardware-based Rate Limiting(Traffic shaping)
	Symmetric and Asymmetric Rate Limiting
Security	System access control by ACL Subscriber Traffic control by Packet Filtering
	Invalid subscriber source ip drop by Packet Filtering

		SPN-3240		
Standards				
Standard Protocols		IEEE 802.1D Spanning Tree Protocol		
		IEEE 802.1w RSTP		
		IEEE 802.1p Priority Control		
		IEEE 802.1Q VLAN		
		IEEE 802.3u 100Base-X Fast Ethernet		
		IEEE 802.3x Flow Control		
		IEEE 802.3z 1000Base-X Gigabit Ethernet		
		IEEE 802.3ad Link Aggregation		
		IETF RFC 768 UDP		
		IETF RFC 791 IP		
		IETF RFC 793 TCP		
		IETF RFC 1058 RIP v1 IETF RFC 1112 IGMP		
		IETF RFC 1723 RIP v2		
		IETF RFC 2131 DHCP Server/Relay		
		IETF RFC 1142 IS-IS		
		IETF RFC 2178 OSPF v2		
IETF RFC 2236 IGMP v2				
IETF RFC 2362 PIM-SM				
Operation and Management		IETF RFC 783 TFTP		
		IETF RFC 854 Telnet		
		IETF RFC 1157 SNMP v1		
		IETF RFC 1213 MIB-I		
		IETF RFC 1724 RIPv2-MIB		
		IETF RFC 1757 RMON-MIB		
		IETF RFC 1850 OSPF-MIB		
		IETF RFC 1902 SNMP v2		
IETF RFC 1907 SNMP-MIB				
Ordering Information				
		Item		Remark
Chassis		SPN-3240	2 fixed slots : 1000Base-X (SFP) 3 slots : 10/100Base-TX module (8 ports), 100Base-FX module (8 ports), Dual AC	
Interface	2Core 100M	SPN-3240-8TX	8Ports 10/100Base-TX Module, 100m, RJ-45 Type	
		SPN-3240-8FX-MM2-2C	8Ports 100Base-FX Module, 2km, Multimode, 2Core, LC Type	
		SPN-3240-8FX-SM15-2C	8Ports 100Base-FX Module, 15km, Singlemode, 2Core, LC Type	
		SPN-3240-8FX-SM40-2C	8Ports 100Base-FX Module, 40km, Singlemode, 2Core, LC Type	
	1Core 100M	SPN-3240-8FX-SM15-1C	8Ports 100Base-FX Module, 15km, Singlemode, 1Core, LC Type	
GBIC (SFP)	1GbE	GBIC-SFPSX	Mini GBIC 1000Base-SX, Multimode, 550m, LC Type, 2Core	
		GBIC-SFPLX10	Mini GBIC 1000Base-LX, Singlemode, 10km, LC Type, 2Core	
		GBIC-SFPLH40	Mini GBIC 1000Base-LH, Singlemode, 40km, LC Type, 2Core	

SPN-2080

L2 Ethernet Switch

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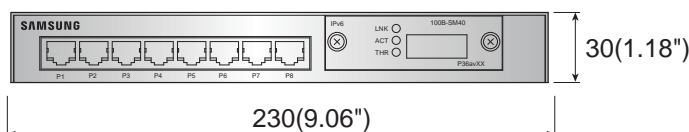


Key Features

- System Architecture
 - 8 fixed 10/100Base-TX ports
(Auto-negotiation, Auto-Sensing, Auto MDI/MDIX)
 - 1 Expansion Module : 1 Port per Option Module
100Base-FX or 1000Base-X(GBIC)
- Small-sized L2 Ethernet switch for the closure
- Up to 8 10/100Base-TX ports supported
- One optional slot module supported:
1000Base-Px (GE-PON uplink)
- Hardware-based bandwidth management for each port
- Network security: DOS protection, worm virus filtering
- Blocking IP sub-network bandwidth, identifying and controlling specific IPs, detecting IP conflicts
- Easy and convenient operating management: TFTP, CLI, Telnet, Syslog, SNMP I/II, RMON, Port Mirroring

Dimensions

Unit : mm (inch)



Functions

Applied to metro Ethernet-based network terminal layer 2, the product is a workgroup switch that enables the service provider to operate the ultra broadband multimedia service in a stable manner.

Connected to a terminal or distribution switch, it is designed to provide a high speed switching service with low costs through 10/100Mbps network connection. Besides, it, as terminal switching solution, supports wire-speed with various services so it is applied to a small-and-medium sized network with significant traffic.

The SPN-2080 switch consists of 8 10/100base-TX (UTP) ports and one optional module supporting 100base-TX port. As any port supports the duplex communication system, you can double the available bandwidth of the link.

Adopting the high-speed non-blocking switch fabric, it processes incoming packets to each port simultaneously to minimize the internal delay time, and each of the packets will be stored in the port buffer before submitted to the integrity test, then they are transferred back to a specific port as needed. This will prevent data error from being spread via the network (Store-and-Forward) and maximize the data integrity. And it also supports IPv6 and hardwarebased bandwidth management (Rate Limiting) and QoS (Quality-of-Service).



Technical Specifications

	SPN-2080	
Hardware Specification		
System Architecture	8 fixed 10/100Base-TX ports (Auto-negotiation, Auto-Sensing, Auto MDI/MDIX)1 Expansion Module : 1 Port per Option100Base-FX or 1000Base-X(GBIC)RS-232C Serial Port (RJ-45 type)	
Memory	64MB Main Memory / 16MB Flash Memory	
Memory	64MB Main Memory / 16MB Flash Memory	
Physical Dimension	30mm(H) x 230mm(W) x 150mm(D)	
Environment Conditions		
Input Voltage and Frequency	12VDC / 2.5A	
Power Consumption	9.9W MAXIMUM	
Operating Temperature	0 ~ 50°C	
Storage Temperature	-20 ~ 60°C	
Performance		
Switching Fabric	3.6 Gbps non-blocking	
Throughput	2.7 Mpps wire-speed L2 Switching	
Capacity		
MAC Address	Up to 16K MAC Management	
VLAN	Up to 256 VLAN, Private Edge VLAN, 8021.Q Tag Vlan (Max 256 Tag Vlan) Link Aggregation (802.3ad) : 13 group, Max 8 port/group	
Services and Features		
Security & Filtering & QoS	IEEE 802.1p QoS, Diff-serv support Congestion Management Filtering: Mac address, Mac address Count limits, Netbios, NBT, DHCP, Broadcast Storm, certain IPcontrol, IP Packet filtering, IP conflict detection, IP Sub-network band blocking Virus Filtering: DoS prevention, Warm virus Filtering Subscriber Traffic control by ACLs (AccessControl Lists)	
Bandwidth Management	Hardware-based Rate Limiting Rate Limiting : 1Mbps per Ethernet port Rate Limiting : 1Mbps per Gigabit port Egress Traffic Shaping per Port Ingress Traffic Policing per Flow/Packet Hardware Based Symmetric & Asymmetric Rate Limiting	
Management	SNMP v1/v2, RMON, MIB-I/II Remote S/W Upgrade, Telnet, TFTP, FTP, PortMirroring CLI, Syslog, Administrator control, RADIUS	
Functions	STP(802.1D), RSTP(802.1w) DHCP relay/DHCP snooping NTP (Network Time protocol) Client Jumbo Frame packet support : 9022byte Stacking & IP Clustering : Max 8 Stacking	
Multicasting Protocol	IGMP v2.0, IGMP snooping, IGMP proxy-reporting	

	SPN-2080		
Standards			
IEEE Standards	802.1D Spanning Tree Protocol 802.1w RSTP 802.1p Priority Control 802.1Q VLAN 802.3 10Base-T Ethernet		802.3u 100Base-X Fast Ethernet 802.3x Flow Control 802.3ad Link Aggregation 802.3z 1000Base-X Gigabit Ethernet
	IETF Standards		RFC 768 UDP, RFC 791 IP, RFC 903 TCP
	Management Standards & MIB		RFC 783 TFTP, RFC 854 Telnet, RFC 1157 SNMP v1 RFC 1213 MIB-I I,
			RFC 2131 DHCP Relay, RFC 2236 IGMP v2, RFC 1112 IGMP
			RFC 1493 Bridge-MIB, RFC 1757 RMON-MIB, RFC 1902 SNMP v2, RFC 1907 SNMP-MIB RFC 1643 Ethernet-like Internet MIB
Ordering Information			
		Item	Remark
Base	SPN-2080		8 fixed 10/100Base-TX ports 1 Expansion Module : 1 Port per Option 100Base-FX or 1000Base-X(GBIC), 12VDC / 2.5A
Interface	2Core 100M	SPN-2080-1FX-MM	1Port 100Base-FX Module, 2km, Multimode, 2Core, SC Type
		SPN-2080-1FX-SM15L-2C	1Port 100Base-FX Module, 15km, Singlemode, 2Core, SC Type
		SPN-2080-1FX-SM40L-2C	1Port 100Base-FX Module, 40km, Singlemode, 2Core, SC Type
	1Core100M	SPN-2080-1FX-SM15-1C	1Port 100Base-FX Module, 15km, Singlemode, 1Core, SC Type
	1GbE	SPN-2080-1G	1Port 1000Base-X Module, GBIC Type, additional GBIC
GBIC	1GbE	GBIC-SX	GBIC 1000Base SX, Multimode, 550m, SC Type, 2Core
		GBIC-LX10	GBIC 1000Base LX, Singlemode, 10km, SC Type, 2Core
		GBIC-LH40	GBIC 1000Base LH, Singlemode, 40km, SC Type, 2Core

SPO-400

Fiber Distribution Frame

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Key Features

- Wall mount type
- Useful and effective in a narrow space
- 4 cores of SC type supported
- Easy installation
- Wiring part protected using the storage tray
- Optical adaptor protected using the closure

Technical Specifications

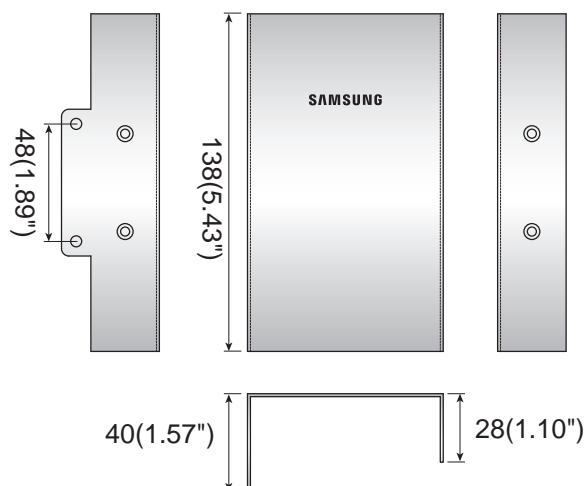
SPO-400	
Number of Core	4
Type	SC - Zirconia
Number of Tray	1
Size	W28mm X D80mm X H138mm
Operating Temperature	0 ~ 45°C
Operating Humidity	0 ~ 50°C
Color	Black

Applications

- Information and Communication System
- CATV Networks
- Local Area Networks
- Data Communications Networks

Dimensions

Unit : mm (inch)



SPO-800

Fiber Distribution Frame

iPOLiS



Key Features

- 19" rack-mount type (1U)
- 8 cores of SC type supported
- Easy installation
- Wiring part protected using the storage tray
- Built-in tray for arranging the optical cables

Technical Specifications

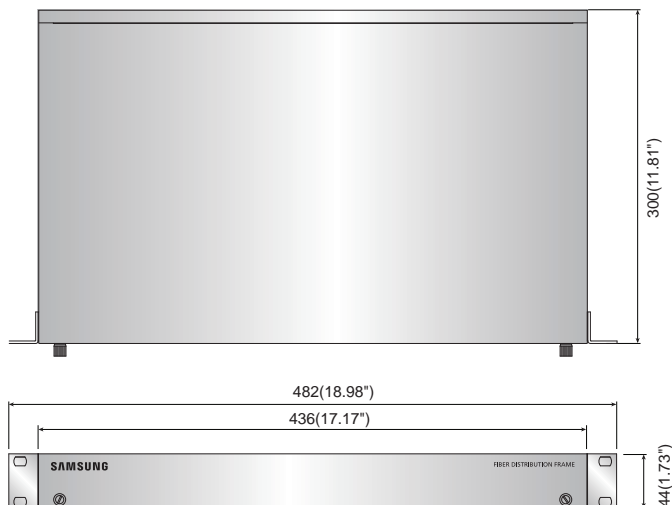
SPO-800	
Number of Core	8
Type	SC - Zirconia
Number of Tray	1
Size	W482mm X D300mm X H44mm(1U)
Operating Temperature	0 ~ 50°C
Operating Humidity	20% ~ 70% RH
Color	Beige

Applications

- Information and Communication System
- CATV Networks
- Local Area Networks
- Data Communications Networks

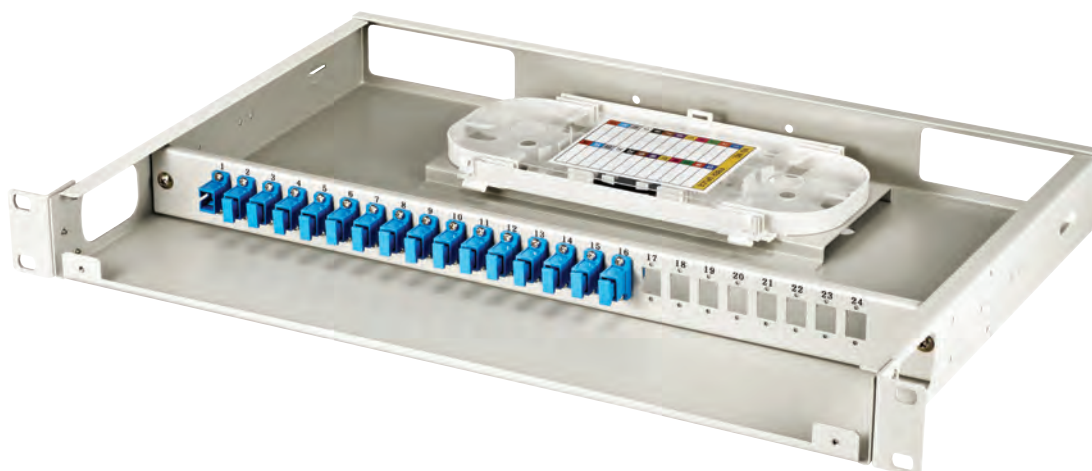
Dimensions

Unit : mm (inch)



SPO-1600

Fiber Distribution Frame



Key Features

- 19" rack-mount type (1U)
- 16 cores of SC type supported
- Easy installation
- Wiring part protected using the storage tray
- Built-in tray for arranging the optical cables

Technical Specifications

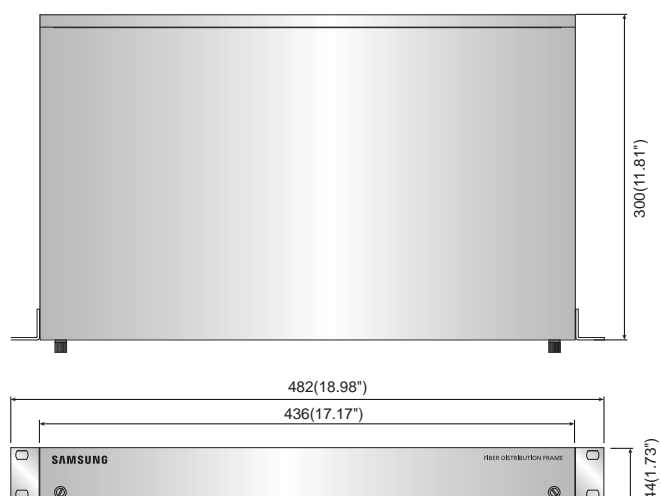
SPO-1600	
Number of Core	16
Type	SC - Zirconia
Number of Tray	1
Size	W482mm X D300mm XH44mm(1U)
Operating Temperature	0 ~ 50°C
Operating Humidity	20% ~ 70% RH
Color	Beige

Applications

- Information and Communication System
- CATV Networks
- Local Area Networks
- Data Communications Networks

Dimensions

Unit : mm (inch)



SPA-100

Vehicle Detection System Module



Key Features

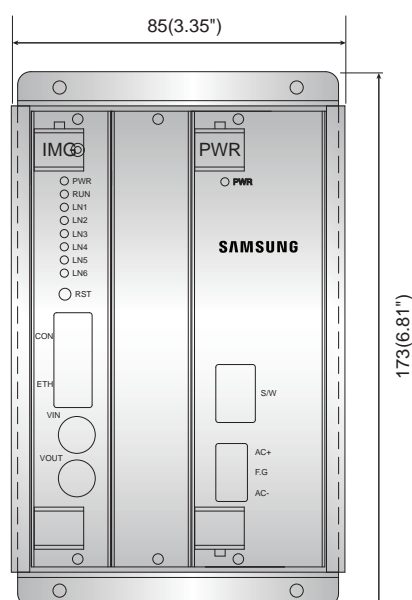
- Embedded System(3-D detection algorithm)
- Various transportation information provided
 - Traffic volume, driving speed, whole length of vehicle, Occupancy, etc
- Video monitoring supported

Technical Specifications

	SPA-100
Control	CPU(Main processor) : 32 Bit, 720Mhz Flash Memory : 4MB RAM : 32MB Boot Time : within 4sec Detection Distance : 20~30M Detection Lane : Max 6 Lane Data Buffer Size : Maintenance of the data for 4 thousands vehicles Support Real Time Clock (year, month, hour, min, sec, msec)
Video input/output	Input: NTSC or PAL 1Vpp, 1CH BNC connector Output: NTSC 1Vpp, 1CH BNC connector, MJPEG
Communication	Ethernet 10/100 Mbps Serial 115,200bps(Max)
Warranty	3year
Operating Temperature	Temperature : -20 °C ~+60 °C, Humidity: 20~ 60%
Power	Input power : 88Vac~264Vac(When writing DC, support another board) Current consumptions: Max 20W
Size	173(H)X30(W)X85mm(D)
Weight	2.1kg

Dimensions

Unit : mm (inch)



SRN-6450/3250

64CH/32CH Network Video Recorder

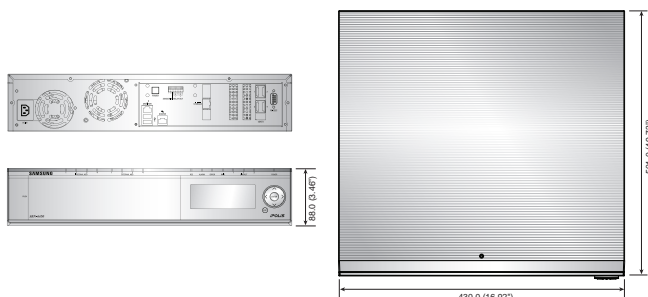


Key Features

- H.264, MPEG-4, MJPEG multiple codec
- CIF high resolution images at 1920fps(N), 1600fps(P) in real-time (SRN-6450)
CIF high resolution images at 960fps(N), 800fps(P) in real-time (SRN-3250)
- Up to 20TB using external storage option

Dimensions

Unit : mm (inch)



Technical Specifications

		SRN-6450	SRN-3250
DISPLAY			
N/W	Inputs	Up to 64CH (CIF 1920/1600fps)	Up to 32CH (CIF 960/800fps)
Camera	Resolution	VGA, 4CIF, 1.3M	
Web	Live	1 / 4 / 9 / 16 / 36 / 64, Sequence	1 / 4 / 9 / 16 / 32, Sequence
Support	Search	1CH	
PERFORMANCE			
Recording	Compression	H.264, MPEG-4, MJPEG	
	Recording Bit Rate	48Mbps (*1)	36Mbps (*1)
	Record Rate (NTSC / PAL)	Up to 320fps@1.3M Up to 1280/1152fps@4CIF Up to 1920/1600fps@2CIF, CIF	Up to 120fps@1.3M Up to 480/400fps@4CIF Up to 960/800fps@2CIF, CIF
	Mode	Manual, Schedule (Normal / Event)	
	Overwrite Modes	Continuous	
	Pre-alarm	Up to 5sec	
	Post-alarm	Up to 60sec	
Search & Playback	Search Mode	Time, Event, Calendar	
	Playback Function	REW, FWD (Depend on CMS)	
Network	Bandwidth Control	Automatic (Automatic transmission control)	
	Max. Remote Users	5 Users simultaneously	
	Protocol Support	TCP/IP, DHCP, DNS, DDNS, HTTP, ARP, ICMP, NTP, RTP/RTCP, RTSP	
	Monitoring	CMS software NET-i, Built-in web server	
Storage	Maximum Capacity	Up to 20TB using external storage option	
	RAID	Normal, RAID1, 5	Normal, RAID1
	Internal HDD	Up to 4 SATA HDDs	
	External HDD	Up to 4 expansion bay (Up to 4 HDD each)	
	NAS	Up to 4 NAS connection (CIFS / Samba)	
Security	Password Protection	2 User level	
INTERFACE			
Monitors	DOT Matrix LCD	20 x 2 Status display	
Alarm	Inputs	Screw terminal 2 inputs, NO/NC	
	Outputs	Screw terminal 2 relay outputs, NO/NC	
	Remote Notification	Notification via e-mail	
Connections	Ethernet	3 (RJ-45 100/1000 Base-T), 1 (RJ-45 100Base-T)	
	Serial Interface	RS-232C	
	USB	2 USB 2.0 ports (Firmware upgrade)	
	eSATA	4 External SATA ports	
IP Camera Protocols	Supported IP Cameras	Samsung, AXIS (*2)	
GENERAL			
Electrical	Input Voltage / Current	100 ~ 240V AC \pm 10%, 50/60Hz, Auto ranging	
	Power Consumption	Max. 110W (With 1x HDD) Max. 130W (With 4x HDD)	
Environmental	Operating Temperature	+5°C ~ +40°C (+41°F ~ +104°F)	
	Operating Humidity	0% ~ 60% RH	
Mechanical	Dimensions (WxHxD)	430.0 x 88.0 x 501.0mm (16.92" x 3.46" x 19.73")	
	Weight (4x Hard Disks)	Approx. 11Kg (24.25 lb)	
	Rack Mount Kit	For mounting one unit in an EIA 19 inch rack	
Language (LCD)		English	
Certifications		FCC (Class A), cUL/UL listed, CE (Class A)	

(*1) Up to 5Mbps for each camera

(*2) VAPIX MPEG-4 Model, Some functions are limited

SRN-1670D/470D

16CH/4CH Network Video Recorder



SBN-1670D



SRN-470D

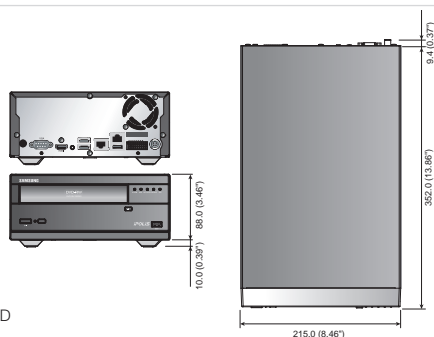
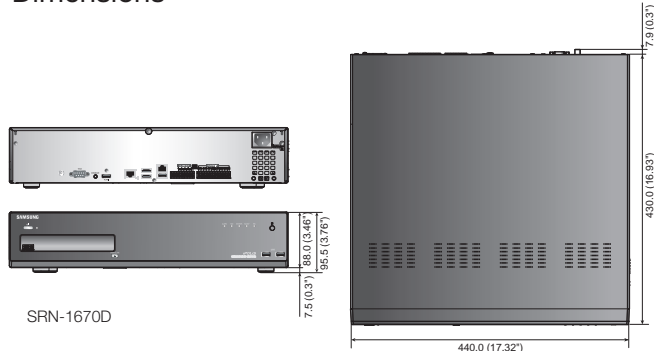


Key Features

- H.264, MJPEG dual codec
- 4CIF high resolution images at 480fps(N), 400fps(P) in real-time (SRN-1670D)
4CIF high resolution images at 120fps(N), 100fps(P) in real-time (SRN-470D)
- DVD writer support

Dimensions

Unit : mm (inch)



SRN-470D

Technical Specifications

		SRN-1670D	SRN-470D
DISPLAY			
N/W Camera	Inputs	Up to 16CH (4CIF 480/400fps)	Up to 4CH (4CIF 120/100fps)
	Resolution	VGA, 4CIF, 1.3M, 2M	
	Protocols	Samsung	
Live	Multi Screen Display	1 / 4 / 6 / 8 / 9 / 13 / 16, Sequence	1 / 4, Sequence
PERFORMANCE			
Operating System	Embedded	Linux	
	Compression	H.264, MJPEG	
	Recording Bit Rate	48Mbps	
Recording	Record Rate / NTSC	Up to 120fps@1.3M, 2M Up to 120fps@1280 x 720 (1M) Up to 480fps@704 x 480 (4CIF)	Up to 120fps@1.3M, 2M Up to 120fps@1280 x 720 (1M) Up to 120fps@704 x 480 (4CIF)
	Record Rate / PAL	Up to 100fps@1.3M, 2M Up to 100fps@1280 x 720 (1M) Up to 400fps@704 x 576 (4CIF)	Up to 100fps@1.3M, 2M Up to 100fps@1280 x 720 (1M) Up to 100fps@704 x 576 (4CIF)
	Mode	Manual, Schedule (Continuous / Event), Event (Pre / Post)	
	Overwrite Modes	Continuous	
	Pre-alarm	Up to 30sec (5, 10, 20, 30sec)	
	Post-alarm	Up to 6hour (5, 10, 20, 30sec, 1, 3, 5, 10, 20min, 1, 2, 3, 4, 5, 6hour)	
Search & Playback	Playback Speed / NTSC	Up to 30fps@1.3M, 2M Up to 60fps@1280 x 720 (1M) Up to 120fps@704 x 480 (4CIF)	Up to 30fps@1.3M, 2M Up to 30fps@1280 x 720 (1M) Up to 120fps@704 x 480 (4CIF)
	Playback Speed / PAL	Up to 25fps@1.3M, 2M Up to 50fps@1280 x 720 (1M) Up to 100fps@704 x 576 (4CIF)	Up to 25fps@1.3M, 2M Up to 50fps@1280 x 720 (1M) Up to 100fps@704 x 576 (4CIF)
	Search Mode	Date/time, Event, Back up (*All search included preview function)	
	Playback Function	Fast forward / backward, Slow forward / backward, Step forward / backward	
Network	Ethernet	Gigabit Ethernet x 2	
	Transmission Speed	Up to 48Mbps, Unlimited (48M) / 2 / 1.5 / 1Mbps / 800 / 600 / 500 / 400 / 300 / 200 / 100 / 50kbps	
	Bandwidth Control	Automatic	
	Max. Remote Users	Search 3 / Live unicast 10 / Live multicast 20	
	Protocol Support	TCP/IP, DHCP, PPPoE, SMTP, NTP, HTTP, DDNS, RTP, RTSP	
	Monitoring	NET-i viewer, Webviewer	
Storage	Internal HDD	Up to 5 SATA HDDs	Up to 1 SATA HDD
	External HDD	eSATA interface	
	DVD Writer (Back up)	Yes	
	USB (Back up)	3 USB ports	2 USB ports
	File Format (Back up)	BU (NVR player), EXE (Include player)	
Security	Password Protection	1Admin, 10 Group, 20 User per 1 group, User can be assigned authority for function	
	Data Authentication	Watermark	
INTERFACE			
Monitors	VGA	Analogue RGB 1280 x 1024(60Hz) resolution	
	HDMI	720p/1080p(60Hz) resolution	
Audio	Inputs	N/A (Network audio support, up to 16CH)	N/A (Network audio support, up to 4CH)
	Output	RCA x 1	
	Compression	G.711/723/726	
Alarm	Inputs	Terminal 16 inputs, NO/NC	Terminal 4 inputs, NO/NC
	Outputs	Terminal 4 relay outputs, NO/NC	Terminal 2 relay outputs, NO/NC
	Remote Notification	Notification via e-mail	
	Ethernet	2 RJ-45 10/100/1000 Base-T	
Connections	USB	USB 2.0, 3 ports	USB 2.0, 2 ports
	eSATA	2 ports	
	Application Support	Mouse, Remote controller	
Dome	Supported		
Protocols	PTZ Cameras	Samsung network products (Network PTZ)	
GENERAL			
Electrical	Input Voltage / Current	100 ~ 240V AC \pm 10%, 50/60Hz, Auto ranging	12V DC adaptor, 4A, 100 ~ 250V AC, 50/60Hz, 55W
	Power Consumption	Max. 60W (With 1x HDD)	Max. 36W (With 1x HDD)
Environmental	Operating Temperature	+0°C ~ +40°C (+32°F ~ +104°F)	
	Operating Humidity	20% ~ 85% RH	
Mechanical	Dimensions (WxHxD)	440.0 x 88.0 x 430.0mm (17.32" x 3.46" x 16.93")	215.0 x 88.0 x 352.0mm (8.46" x 3.46" x 13.86")
	Weight (2x Hard Disks)	Approx. 7.5Kg (16.53 lb)	Approx. 3Kg (6.61 lb)
	Rack Mount Kit	2ea	N/A
Language	Korean, Japanese, Chinese, English, French, German, Spanish, Italian, Russian, Polish, Czech, Turkish, Netherlands, Portuguese, Swedish, Danish, Thailandais, Rumania, Serbia, Croatia, Hungarian, Greek (22 Language)		

SPC-2000

Network Controller

iPOLiS

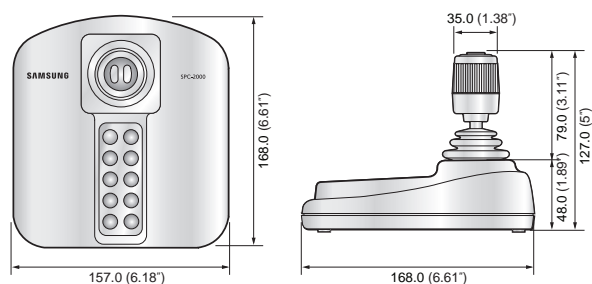


Key Features

- Superior system compatibility
- 3D joystick control
- Quick and easy installation
- NET-i viewer support

Dimensions

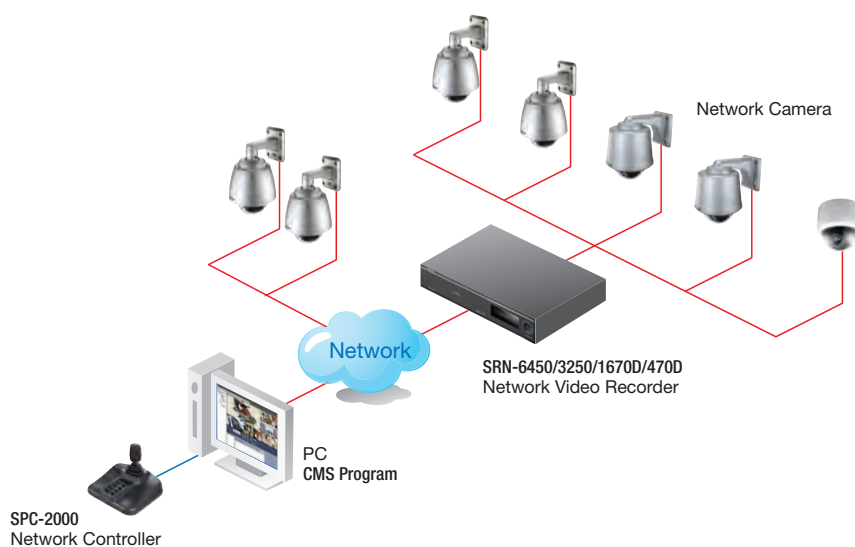
Unit : mm (inch)



Technical Specifications

	SPC-2000
PTZ Control	Joystick (3-axis twist zoom)
Interface	USB 2.0, DirectX
Voltage	5V DC, 32mA (USB)
Operating Temperature	-25°C ~ +70°C (-13°F ~ +158°F)
Operating Humidity	10% ~ 70%
Dimensions (WxHxD)	157.0 x 127.0 x 168.0mm (6.18" x 5" x 6.61")
Weight	440g (0.97 lb)

System Configuration



DEVICES

Input/Output

Transmission / Control / Analytics

Peripheral

Recommended Devices



SHB-4300H/SHB-4300H1/SHB-4300H2
SHB-4200/SHB-4200H
STH-500/STH-200
SPR-410
SPR-580/581/581U/582
SPR-1800

SMTNC
ALSB-100
DS42-230
SIB-30

GE/EATON
ML500
EP2000
EX2200RT3U
LP Series: UPS

IBM
IBM-X3250

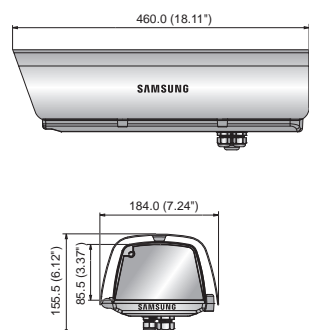
ALU
OS6850 Series
OS9700E Series
OS9 Series

Fixed Housings

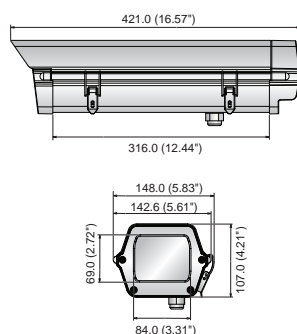
								
		SHB-4300H	SHB-4300H1	SHB-4300H2	SHB-4200	SHB-4200H	STH-500	STH-200
Open Type		Side open	Side open	Side open	Side open	Side open	Side open	Side open
Cable Entry		Nylon gland	Nylon gland	Nylon gland	Nylon gland	Nylon gland	Nylon gland	Nylon gland
Operating Temperature	Set	-35°C ~ +50°C (-31°F ~ +122°)	-50°C ~ +50°C (-58°F ~ +122°F)	-50°C ~ +50°C (-58°F ~ +122°F)	-10°C ~ +50°C (14°F ~ +122°)	-35°C ~ +50°C (-31°F ~ +122°)	-10°C ~ +50°C (14°F ~ +122°)	-40°C ~ +50°C (-40°F ~ +122°F)
	Heater	5°C ± 5°C on	5°C ± 5°C on	5°C ± 5°C on	N/A	4°C ± 3°C on	N/A	N/A
	Blower	+45°C ~ +5°C on	+45°C ~ +5°C on	+45°C ~ +5°C on	N/A	+45°C ~ +5°C on	N/A	N/A
Defroster		N/A	Constant	Constant	N/A	N/A	N/A	N/A
Operating Humidity		-20% ~ 49% RH	-20% ~ 49% RH	-20% ~ 49% RH	-20% ~ 49% RH	-20% ~ 49% RH	-20% ~ 49% RH	-20% ~ 49% RH
Materials		Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum	Aluminum
Ingress Protection		IP66	IP66	IP66	IP66	IP66	N/A	N/A
Dimensions (WxHxD)	External	184.0 x 127.0 x 460.0mm (7.24" x 5" x 18.11")	184.0 x 127.0 x 460.0mm (7.24" x 5" x 18.11")	184.0 x 127.0 x 460.0mm (7.24" x 5" x 18.11")	148.0 x 107.0 x 421.0mm (5.8" x 4.21" x 16.57")	148.0 x 107.0 x 421.0mm (5.83" x 4.21" x 16.57")	144.0 x 100.0 x 500.0mm (5.67" x 3.94" x 19.69")	118.0 x 92.0 x 405.0mm (4.65" x 3.62" x 15.94")
	Internal	100.0 x 80.0 x 383.0mm (3.94" x 3.15" x 15.08")	100.0 x 80.0 x 383.0mm (3.94" x 3.15" x 15.08")	100.0 x 80.0 x 383.0mm (3.94" x 3.15" x 15.08")	84.0 x 69.0 x 319.0mm (3.31" x 2.72" x 12.56")	84.0 x 69.0 x 319.0mm (3.31" x 2.72" x 12.56")	88.0 x 68.0 x 383.0mm (3.46" x 2.68" x 15.08")	70.0 x 56.0 x 360.0mm (2.76" x 2.2" x 14.17")
Weight		3.5Kg (7.72 lb)	3.7Kg (8.16 lb)	3.7Kg (8.16 lb)	1Kg (2.2 lb)	1.1Kg (2.3 lb)	1.5Kg (3.31 lb)	1Kg (2.2 lb)
Input Voltage		24V AC	24V AC	230V AC	N/A	24V AC	N/A	N/A
Color		Ivory	Ivory	Ivory	Ivory	Ivory	Ivory	Ivory
Applicable Model		Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)	Box Cameras (Network/Analogue)

Dimensions

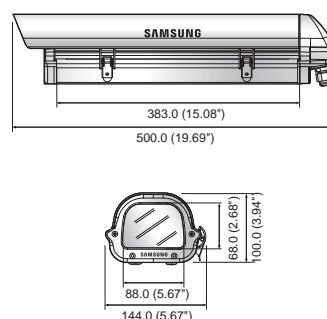
Unit : mm (inch)



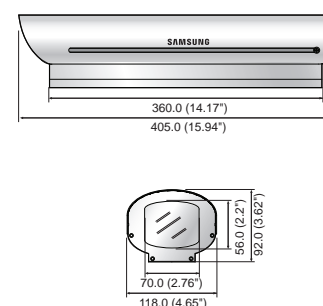
SHB-4300H/4300H1/4300H2



SHB-4200/4200H



STH-500



STH-200

SPR-410

Outdoor Cabinet



Key Features

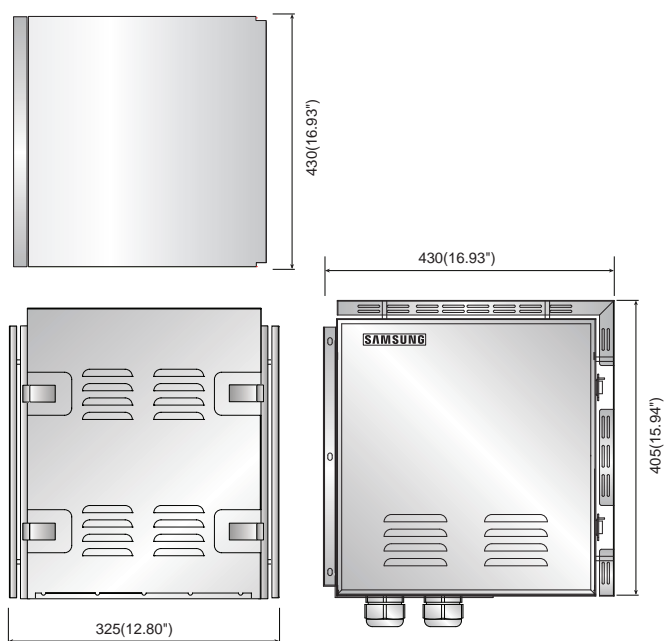
- All-weather outdoor cabinet
- Easy attachment / detachment with the left/right opening system
- Improved protection of internal device with dual-structure door, and maintenance of internal temperature with air cooling.
- Sunshield for protecting the sun light
- Dust-proofing, waterproofing certified (IP33)
- Thermodynamic internal structure for maintaining the internal temperature.

Specifications

Item	SPR-410
PURPOSE	Outdoor cabinet
Open/Close	Left/right opening system
Cable lead-in	Waterproof connector
Material	Stainless Steel
Protection Degree	IP33
Dimension	430(W) x 405(H) x 325(D) mm
Door sensor	Integrated
Weight	18kg

Dimensions

Unit : mm (inch)



SPR-580/581/581U/582

Outdoor Cabinet



Key Features

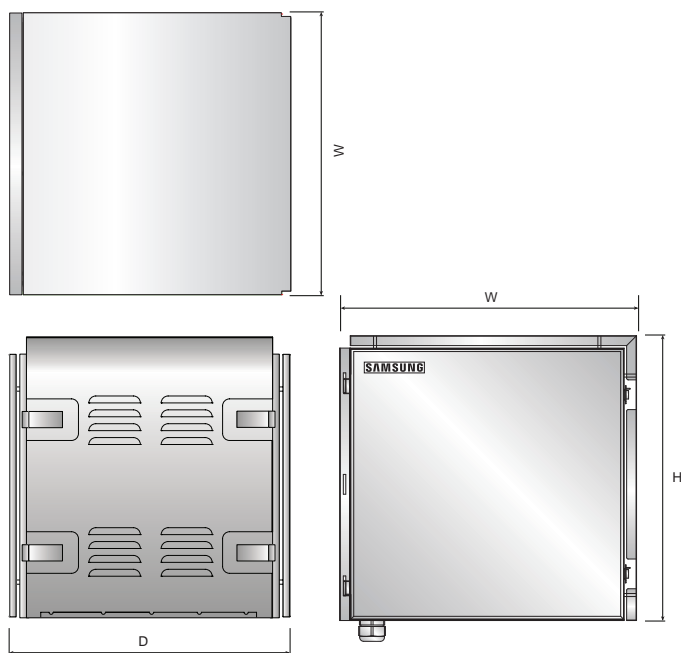
- All-weather outdoor cabinet
- Easy attachment / detachment with the left/right opening system
- Improved protection of internal device with dual-structure door, and maintenance of internal temperature with air cooling.
- Sunshield for protecting the sun light
- Dust-proofing, waterproofing certified (IP33)
- Thermodynamic internal structure for maintaining the internal temperature

Specifications

Item	SPR-580/581/581U/582
Purpose	Outdoor cabinet
Open/Close	Left/right opening system
Cable lead-in	Waterproof connector
Material	Stainless Steel
Protection Degree	IP33
Fan	Integrated
Door sensor	Integrated

Dimensions

Unit : mm (inch)



Model	W	D	H	Weight
SPR-580	580	475	575	28kg
SPR-581	580	545	575	31.5kg
SPR-581U	730	545	575	39kg
SPR-582	580	625	575	34kg

SPR-1800

Rack Mount

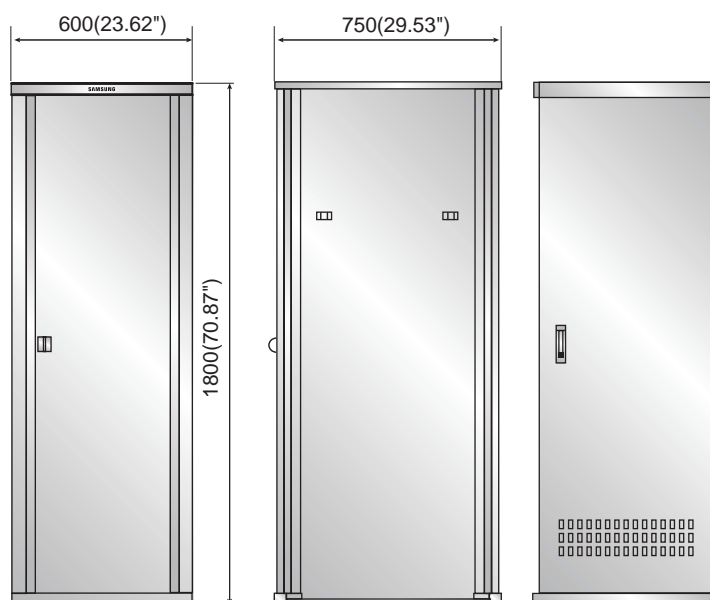


Key Features

Rack mount type that allows for installing medium-and-large sized communications devices

Dimensions

Unit : mm (inch)



H	(EIA)U	D	W	Weight
1800mm	37(1U=44.45mm)	750mm	600(19")	80kg

Recommended devices

SMTC Lightning Stroke Prevention System

ALSB-100

Distributed Discharging Lightning Conductor

- It discharges the induced electric charge in the air to maintain the strength of the electric field between protection area and thunderstorm cloud, a fundamental protection system.
- Effective range: A radius of between 7m and 15m
- Made of semi-permanent stainless steel
- The linear design enables strong resistance to the wind pressure, not affected by the strong wind.

DS42-230

DS42-230 Surge Protector

- The surge protection voltage range meeting KS specification (250V)
- Cost effective plug-in type of body and base so the body alone can be replaced.
- It makes system maintenance easy that you don't need to turn off the power when replacing the body.

SIB-30

SIB-30 Auto Recovery Circuit Breaker

- The surge protection voltage range meeting KS specification (250V)
- Cost effective plug-in type of body and base so the body alone can be replaced.
- It makes system maintenance easy that you don't need to turn off the power when replacing the body.

Recommended devices

GE/EATON Power Supply Unit (UPS)

ML500

Key Features

- Automatic voltage regulation
- Extended life of storage battery using a wide range of super boost
- Communications between UPS and PC using RS232
- Extended life of storage battery with the intelligent storage battery management system
- Easy installation with Plug & Play system
- Capacity: 500VA/300W, Input: 220-240V, Output: 230Vac
- Voltage and capacity of storage battery: 12V/7Ah, current: 0.7Ah
- Dimension: 110(W) x 300(D) x 150(H) mm

EP2000R / EX2200RT3U

Key Features

- Online double conversion technology with excellent electric efficiency
- LED display – overload, online & battery state
- Seamless digital microprocessor control
- Programmable system shutdown (optional)
- Surge protection, plug & play, battery (cold) control
- Multi-user interface: RS232, USB, SNMP
- EP2000R: Capacity: 2kVA/1.4kW, I/O voltage: 220V,
- EX2200RT3U: Capacity: 2.2kVA/1.98kW, I/O voltage: 220V,
- Backup time: EP2000R (10 min), EX2200RT3U (12 min)
- Dimension: EP2000R: 483(W) x 420(D) x 88(H) mm (19", 2U)
EX2200RT3U: 131 x 440(W) x 640 (D) x 86(H)mm

LP8-11/10-11/15-31/20-31/20-33

Key Features

- Compact size and moving wheels equipped for easy transportation
- Optimized size of UPS with a high power factor
- Battery life expectation, SNMP remote monitoring
- Overcharging protection using temp compensation
- Capacity (KVA/KW): 8/6.4, 10/8, 15/12, 20/16, 20,20
- Input voltage (VAC): LP x-11(172-285), LP x-31(300-470), LP x-33(324-478)
- Dimension (W x D x H, mm): LP x-11(313x720x680), LP-31(410x890x1190), LP x-33(500x780x1310)

Recommended devices

IBM Network Server

IBM-X3250

Key Features

- A max of 32 GB, DDR-3 ECC memory used
- Max 1,333 MHz, 1/ 2/4 GB UDIMM, 1/ 2/4 GB RDIMM.
- 3.5" simple swapping SATA HDD (x2), 3.5" hot swapping SAS/SATA (x2), or 2.5" hot swapping SAS HDD (x4). Excellent cost performance
- Energy consumption monitoring and control, power consumption/heat status check, PDU+ supported

ALU Network Switch

OS6850-24X / OS6850-48X

Key Features

- Up to 8 stacks – 40GbE stack ring supported
- Up to 400 ports supported (384 GE + 16 10GE)
- Add or delete a stack while in operation (Hot Swap)
- Wired-speed switching and routing
- DoS protection, sFlow supported

OS9700E-RCB-A / OS9800E-RCB-A

Key Features

- Terabit Ethernet platform
- Carrier-quality stability
- Wired-speed switching and routing
- Auto recovery of images and OS

Network Interface Card

OS9-GNI-C24E / OS9-GNI-U24E OS9-XNI-U12E / OS9-XNI-U2E



iPOLiS Samsung Security Solutions

2011 Integrated Security Solution



The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

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